

PROJECT IN RESEARCH IN UNIVERSITIES

Learning English Incidentally: A Study of Bilingual Children

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Foreword

THIS BULLETIN is one of a series reporting the findings of investigations undertaken during 1936-37 under the Project in Research in Universities of the Office of Education. The project was financed under the Emergency Relief Appropriation Act of 1935, and conducted in accordance with administrative regulations of the Works Progress Administration. Study findings in addition to those reported in this series will be made available in other Office of Education or institutional publications.

The Project in Research in Universities represents a unique and significant innovation in cooperative research. Sixty universities and comparable institutions located in 32 States, the District of Columbia, and Hawaii combined efforts with the Office of Education to conduct 40 studies, 23 of which were proposed by the Office and 17 by the institutions. Each institution was invited to participate in all of the approved studies that it was in a position to undertake. From 1 to 14 studies were conducted in each institution, and a total of more than 150 separate study reports were made to the Office of Education.

An important feature of the project was the widespread and coordinated attack on each problem by a number of universities at the same time. Each study proposed by the Office of Education and accepted by the universities was conducted by two or more institutions. As many as 31 institutions, located in 20 States representative of each major geographical division of the country, participated in one study alone. The task of planning, administering, and supervising the many projects and studies on a national scale, under complex and often difficult conditions, demanded the finest type of cooperative endeavor. Except two places where qualified relief workers could not be found or retained, every institution which actually began work on the project carried it through to successful completion. The fine professional spirit in which responsibility for the work was accepted and maintained by the institutions made possible the successful completion of the project within approximately 1 year.

With this professional spirit of cooperation in worth-while research and

study of educational problems, was manifested a strong humanitarian desire to join hands with Federal agencies striving during the years of the depression to afford gainful and socially desirable employment to college graduates or former college students in the type of work for which they were best prepared. For these contributions to educational research and to the social good of the Nation, the Office of Education extends to its colleagues and helpers in the universities of the country its grateful acknowledgment and appreciation.

The present bulletin is one of three publications resulting from a series of studies concerned with successful practices in teaching English to bilingual children. This is a problem the importance of which has been increasingly recognized in recent years. It is hoped that these initial publications relating to methods used in specific school systems will be stimulating and suggestive in the further development of instructional programs suited to the needs of children coming from homes in which English is used only secondarily or not at all.

BESS GOODYKOONTZ,
Assistant Commissioner of Education.

Coordinator's Statement

THE EDUCATIONAL welfare of children of native and minority groups in continental United States and its outlying parts involves instructional procedures which in recent years are becoming more and more recognized as constituting specialized problems in education. They are involved both in method and content of instruction and are particularly significant during the early school years.

Bilingualism is generally recognized as offering serious instructional difficulties among minority groups, though social and economic adjustment in the homes from which the majority of bilingual children come are necessarily reflected in the conduct and attitudes as well as in progress in the school studies of the children concerned.

Adaptation of curriculum content to the ability, needs, and experiences of children from foreign-speaking homes; the development of appreciative understandings on the part of the teachers as well as the parents; the school's responsibility for the acquisition of facility in the use of English in the early years of the child's school life in order that he may profit from later instruction as well as for practical social reasons, all offer a continuing succession of teaching problems.

Research and experimentation concerned with the variety of problems involved in the education of bilingual children is as yet quite inadequate to the needs. This bulletin reports a successful experiment in educating children of Mexican extraction extending over a period of years. The situation is probably representative of that in many communities in our Southwestern States.

It is believed, therefore, that this report of the experiment will be of special interest to teachers and administrators in communities in which Mexican children predominate. It should, however, be almost equally suggestive to schools which children of foreign speaking parents of whatever nationality attend. Indeed, the organization, equipment, and methods proposed in the La Jolla School offer suggestions of value in all schools. The success of the practices reported under difficult conditions as in the La

Jolla School will be encouraging to all schools in which departures from traditional practices are followed or contemplated.

KATHERINE M. COOK,
Study Coordinator.

Author's Preface

AS PROFESSOR OF EDUCATION at the University of California at Los Angeles, I was invited to direct a project in research in cooperation with the Office of Education at Washington. The topic assigned was: "Successful Practices in the Teaching of English to Bilingual Children." This topic carried the implication that the work of a Mexican school under my direction for the past 7 years is a successful practice. Measuring the results was not required, but reporting the procedures in this school was clearly implied.

After this invitation was accepted, it became clear that additional research as such could not be achieved within the 8 months planned for the study. Research had been carried on in this school since September 1930. This report was planned, therefore, to be essentially a collection, organization, and presentation of data already available. Coupled with this report would be a presentation of educational principles underlying the work of the school.

The presence of bilingual children in the schools of southern California, in some cases to the extent of 100 percent of the enrollment, presents an important problem. This study of a school of only Mexican children presents the conviction that the difficulty of coping with this situation is not commensurate with current notions of it. It is hoped that the study will contribute much by way of relieving both pupils and teachers of unnecessary expenditure of energy in the teaching and the learning of English.

In place of measurements to justify procedures here reported, chapters VI and VII present the theory underlying the procedures. That theory must stand or fall when, sometime later, reliable measures are made of the work done.

As local project administrator and supervisor of this project in research, I wish to express my appreciation of the cheerful and faithful service of all who have cooperated. Special acknowledgment is made of the excellent service rendered by the supervisory assistant, Gertrude Pastoret.

J. L. MERIAM.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES,
March 19, 1937.

[CHAPTER I]

The Problem A Challenge For More Effective School Work

BILINGUAL CHILDREN A REAL PROBLEM

FOR A CENTURY and more the United States has been the "melting pot" for the peoples of many nations seeking homes in this country. Essentially the whole history of our national development is the story of how this "melting pot" has amalgamated a variety of peoples into one mode of civilization.

This national policy of harboring all peoples who crave a type of life higher than that in their own countries resulted in an immigration problem, which, while it was relatively insignificant in earlier times, developed to such an extent as almost to reach the breaking point. Immigration became closely regulated; and regulation meant for many forbidden entrance.

Immigration is largely a civic-social or political problem. Students of society and officials of the Government regulate entrance and control conduct. But the public school cannot be overlooked in the influence over the immigrant after entrance.

At this point it becomes of interest and of real importance to note the number and geographical locations of these new incomers. It is quite obvious that along the two coasts and the northern and southern borders the larger numbers are to be found, especially so in the larger urban centers. A geographical table showing the attendance of foreign-tongued children in such cities as New York, Chicago, San Francisco, Los Angeles, and along the Mexican border, would be instructive. School people would be the more impressed with the gravity of the problem of educating those whose native language is other than English. It must suffice to present an inclusive view over the whole of our country.

Table 1 accounts for children from 5 to 20 years of age. It is challenging to observe how the percentage in attendance falls from 71.8 for native whites to 55.6 for whites of foreign birth. The fall is yet greater when we observe the children of other races—of particular interest here, the Mexican. The percentage of attendance is 52.1. This is about one-third less than

among native whites. It might be postulated by way of explanation that American laws governing school attendance are not as vigorously applied with Mexican as with native American children. There may be some truth in this. More valid explanation is probably to be found in the nature of the school work itself. Foreign-born and Mexican children experience too little in the content of school work that appeals to them and is of value in their own style of living. If the school does not appeal as of practical value for them, they withdraw if attendance laws are not enforced. Native white children attend school—71.8 percent—on the general assumption that public school work is valuable. Such people as the Mexicans do not see that the conventional schooling is valuable to them and they attend as little as possible. The larger percentage of attendance by the Chinese, Japanese, Hindu, and Korean may readily be explained on special grounds. The study herein reported raises the question as to whether the conventional school program is suitable for the Mexicans—and perhaps Americans also. Perhaps the assumed ignorance of the foreign-tongued people is in reality an unintended challenge to educators to provide an education that meets vital needs rather than to lead them into a form of education which time has developed.

TABLE 1.—*School attendance and population*

[School attendance of the population 5 to 20 years old, tabulated by color and nativity for the United States in 1930 (98, p. 1094)]

Color and nativity	Population 5 to 20 years old		
	Total	Attending school	
		Number	Percent
1	2	3	4
All classes.....	38,387,032	26,849,639	69.9
White.....	33,536,777	23,969,129	71.5
Native.....	32,835,801	23,579,380	71.8
Native parentage.....	24,080,683	17,288,107	71.8
Foreign or mixed parentage.....	8,755,118	6,291,273	71.9
Foreign born.....	700,976	389,749	55.6
Negro.....	4,128,998	2,477,311	60.0
Other races.....	721,257	403,199	55.9
Mexican.....	520,320	270,854	52.1
Indian.....	129,145	77,806	60.2
Chinese.....	15,286	11,549	75.6
Japanese.....	47,825	40,156	84.0
Filipino.....	7,807	2,180	27.9
Hindu.....	216	151	69.9
Korean.....	525	435	82.9
All other.....	133	68	51.1

In most school districts having a problem of bilingualism, two situations are found: One in which the foreign-tongued children are intermingled with the regular Americans, with greatly varying ratios as to numbers; the other

in which the enrollment is 100 percent foreign-tongued. The problem in the former situation is generally said to be that of acquiring sufficient control over the English language to enable the foreign-tongued to cope with classmates using English as their mother tongue. In the second situation, emphasis is upon the problem of coping with the curriculum expressed in English, and of getting instruction from a teacher who uses only English. In each case the immediate point of effort seems to be acquiring the English language as a tool. Before looking further into this problem of the English language, it is well to note an objective that lies behind the language problem.

In American schools for all Americans, citizenship—whatever may be involved in this term—is receiving more and more attention. Improved citizenship is assumed to be a prominent objective in practically every school subject. This is particularly true of the social studies.

The city of Madison places citizenship fifth in the list of aims in the social studies in the primary and intermediate grades, as follows: "To give concepts that will be basic to a sound practical program of citizenship training" (50).¹ In the outline *The Coming of Winter* for the first grade, the activity is correlated with health, safety, and citizenship. An attempt is made to meet the needs of the children through the consideration of a series of questions, such as:

1. What can we do to help keep our homes and buildings free from mud-in wet weather?
2. Lawns in wet weather—how can we protect them?
3. Protect others from illness by taking proper care of one's self.
4. Feed the birds.

* * * * *

6. Help the poor (50).

In the curriculum in social studies for the fifth grade some of the activities designed to develop citizenship are:

1. Care of school buildings and grounds.
2. Care of books and economy with paper, crayons, etc.
3. Quiet, orderly passing to and from classes.
4. Audience courtesy in the auditorium (51).

Results of such units are, in part, evaluated on the basis of attainment of these aims. Citizenship is an indefinite term, the degree of which is not yet measured objectively, but it is hoped by school program makers that this improvement in citizenship is obtained and that it is evidenced by the improvement of individual social behavior.

In the city of El Paso, a first-grade aim for patriotism is under the caption of "Citizenship" (25, p. 4):

¹ Refers to numbered references in bibliography at end of report.

To instill a love for our flag, and confidence in and respect for the things for which it stands, and to give some understanding of the more fundamental principles underlying citizenship.

This objective is approached through songs, stories, flag salute, and programs. Citizenship through a "Safety Program" provides "activities" for these little people to help them to learn to read.

The second grade in El Paso (25, p. 8) aims to develop citizenship through developing attitudes of: Reverence, courtesy, unselfishness, service, dependability, chivalry, sympathy, and respect for authority. These may also be rated subjectively in terms of child behavior. This school system apparently neglects "citizenship" as such beyond the second grade.

The Berkeley, Calif., course of study in social studies (8, p. 76) lists among its specific objectives for the low-fifth grade:

1. To develop from a knowledge of our European background an attitude of tolerance, sympathy, or kinship with the immigrant, which will result in good citizenship.
* * * * *
4. To instill some appreciation of the duties, responsibilities, and privileges of the American citizens.
* * * * *
8. To promote a feeling of responsibility for being good citizens at all times.

These aims in the Berkeley schools are met through an intensive study of North America, its history, geography, sociological background, and through creative expression of these phases.

In recent years the so-called "Social studies" program appears to make more positive and direct contributions to the development of citizenship. This stress upon citizenship for American children seems to be doubled—and more—in the case of foreign-tongued children. That is, it is a large problem for our schools to prepare regular Americans for approved citizenship. It is a much larger problem to accomplish the same with children assumed to be handicapped by being unacquainted with the language in use.

State laws, city ordinances, and board of education regulations call upon our schools to guide these pupils into American ways—especially the way of good citizenship. And it seems to be tacitly assumed that the highway to good citizenship is the byway of control over the English language.

The word "bilingual" has been defined as "speaking two different languages," but it is also interpreted through its social and individual application. Socially it may mean that different languages are spoken by different sections of the population, and individually that they are

spoken by the same person. In American schools bilingualism is generally accepted as a handicap. Sanchez (85) uses the term "bilingual or environmentally handicapped" when referring to the Spanish-speaking people in American schools. Bilingual children, in this study, are those children who use their own mother tongue at home and off the school grounds, but who in school must acquire and use English.

Thus the immediate problem is to give to bilingual children instruction in the English language. This may seem a simple matter, but the variations in public schools and in the current theories of teaching foreign languages indicate that the problem is not so simple. Moreover, this report presents a practice in which acquiring the English language, and that successfully, is not *the* objective, but rather is incidental to other pupil activities.

PRACTICES IN PUBLIC SCHOOLS ARE CHALLENGING

Current practices in public schools in which bilingual children are enrolled are challenging—perhaps to do something better. Quite different types of public-school procedures are readily detected. Annie Reynolds (76) observes that San Antonio has long held first place in the education of Mexican children and has undoubtedly deserved it by a continual march in the right direction. A few years ago definite steps were taken to increase the enrollment in junior high schools. There were at one time six junior high schools in San Antonio, but not one in or adjacent to a Mexican district. School authorities decided to remedy this, so a seventh junior high school was opened. It was located in the heart of a Mexican section. The response was immediate and the results have more than justified the plan. Mexican pupils attend the school in large numbers. The school now functions in two departments; the upper department supplies a senior high school and the lower a junior high school.

A bulletin of the San Antonio schools informs us that the 500 boys and girls attending the Mexican junior high school in San Antonio are given much opportunity in English and in the vocations, including adequate training for those that wish to go to universities later on. Courses are offered in sewing, cooking, and art work for girls. Many useful subjects were taught for boys, such as machine-shop work, auto repair, auto painting, sheet-metal work, top making, and bench and cabinet making in wood. There is also a department in which typesetting and job printing are taught (84).

In the first grades in San Antonio, under the guidance of the director of elementary education, this same contact with practical life is made. Teachers in the Mexican schools make generous use of readers of which Miss Neal is author (65).

For example:

Stand, Juan.
I stand.
Stand, Jose.
I stand.
Stand, Maria.
I stand. (65, Primer.)

Mother washed the pots and pans.
She dried them, too.

Mother swept the floor.
Then the kitchen was clean. (65, First Reader.)

Thus, phases of home life are dramatized in school, conversation, and reading—all primarily for the purpose of leading the children to use the English language, rather than study for the improvement of child behavior. This means that home life is used as a motivation or device for learning English.

The State of Texas (92) has set a seal of approval on the following ideas and techniques: English should be taught to foreigners as a foreign language; foreign-speaking children, learning English, should be looked upon by instructors as being in the same position as American children who are learning French or German; words taught should be of ultimate value to the child; all words taught should be obviously associated with their meaning; repetition of new words is necessary; their presentation should be accompanied by an interesting experience, thus affording the child an incentive to use them. Instruction of the foreign child in English should, at all times, be lively and interesting.

The State Course of Study makes further specifications, as follows:

1. Objects, pictures, vocabulary cards, charts, singing games, motion songs, and dramatization are all contributing aids to the cause of English instruction.
2. Objects should be, largely, toys representative of children's homes and of animal life.
3. Pictures are indispensable, colored ones being, of course, preferable. These should include pictures that have children and animals as outstanding subjects, home scenes, people, birds, poultry, fruit, vegetables, etc.
4. Vocabulary cards prove a most effective tool of instruction in teaching beginning English to foreign-speaking children, particularly during the first few weeks.
5. Charts also are competent aids.
6. A library shelf of books is an important factor in the equipment of primary rooms for non-English-speaking pupils. The books should comprise reading matter suitable to little children and be attractively bound and illustrated. There should be crayolas, scissors, paste, clay, tables, etc., for the children's use.

Of the Los Angeles school procedures M. Madilene Veverka (46) writes, in explanation of their educational goal, that all education, whether of American or foreign children, should have for its final aim the fitting of a child for social efficiency. Experience is the only secure way to create that fitness. The curriculum must provide that experience for the duration of school life. The experiences must be carefully selected that they may carry the child into fields that will make for growth in the varied aspects necessary to a well-developed character.

Veverka holds that the kindergarten, while informal, is no less educative than the higher levels. Indeed, all education of today has its roots in the kindergarten. The aim should be to make it a place where the child lives healthfully and richly. Kindergartens utilize doll plays, the play house and its related establishments, the store, market, street car, gas station, airplane, boats, trains, etc. Everything should be done to stimulate and bring forth a child's best expression of himself.

The preprimary or transition B 1 class is particularly helpful to the non-English-speaking child who is chronologically and legally eligible to enter first grade but who is regarded as not equipped for reading or to meet other grade requirements. The aim of this class is to create in the child a better understanding and appreciation of home and school environment and awaken an interest in him to record that understanding and appreciation. The transition grade concentrates on such subjects as home and family life, caring for pets in school, health, the market, the farm, the real garden, and so on.

Procedure in the first grade is very much the same as that in the B 1 or preprimary grade, merely enlarging and advancing. Beginning reading is embraced in the second grade; informal reading should now supplement the reading texts. Work in this grade should tend to clarify social concepts. Manual skills and mental processes should be developed. Veverka (46) lists among the topics that have proved interesting and productive of usefulness for children at this stage: Community life, transportation, our school, library, post office, circus, puppet shows, dramatizations, and so on.

The State of California (13) emphasizes the fact that while the aims of education are practically the same for all children, foreign or non-English-speaking children need special techniques of which the instructor should be constantly aware.

As one examines numerous school systems and their individual procedures in the treatment of these foreign-tongued pupils, three types are quite readily distinguished: (1) Drill upon the English language forms, using varied devices to induce responsive learning; (2) study of home life and topics which appeal to children for the purpose of stimulating language response—that is, to learn English; (3) study of home life and topics affecting

child life for their own sake, providing for English as only an incidental byproduct.

"MOTIVATION" AND "MOTIVE" CHARACTERIZE TWO DISTINCT METHODS

The terms "motive" and "motivation" are frequently rather loosely used as though they were synonymous. For the purpose of emphasizing one viewpoint as quite distinct from another, a marked difference between these two terms is here expressed. "Motivation" carries the idea long prevalent among educators in relation to pupils who show a disinclination to study work of the formal school stamp. The school regime calls upon these pupils to study. Teachers are in the position of executives. They must bring pressure to bear upon the pupils to induce them to respond. Resort is made to a variety of enticements. On the farm, in earlier times, the balky horse was induced to pull his load by the placing of a "peck of oats" in front of him. He wishes to eat the oats; he pulls the load in order to reach the food he craves. On the very same principle, the German teacher of boys induced his pupils to read by molding the reading book in gingerbread—then, "as fast as he can learn, he eats the letter." This is "motivation"—the inducement to act by means of providing a situation in which the pupil just normally does act; and in consequence accomplishes what the teacher wishes him to do.

"Motive", on the other hand, is merely the impulse to act for the accomplishment of that particular act—not as a first step to the accomplishment of a second objective. The balky horse has a motive—interest in eating oats, as his choice food. The hungry German boy has a motive in eating gingerbread. Eating is a normal behavior.

The more formal and conventional the work of the school, the greater the resort to "motivation" through extraneous instruments. The more normal and appropriate the work of the school, the greater is the "motive" already within the pupil, making unnecessary a resort by the teacher to indirect means.

Thus, current school practice tends definitely toward a higher development of the normal activities of children. In such activities *motive* runs high. A second trend is two-faced; on the one side it recognizes this motive in children's normal behaviors and at the same time recognizes how this motive may become a *motivation* for a traditional phase of the school work, namely, the tool or drill subjects.

English language forms are tools accepted as imperative in American life. To induce pupils to respond to these forms, *motivation* through selected normal activities is strikingly current. The challenge, in this case, is met by the theory that to motivate the learning of English forms by using children's

normal activities is a gross abuse of the activities; and, further, the objective should be the improvement of the activities, rather than acquiring English forms. In other words, help children to improve in their normal activities and they will acquire, incidentally, the English forms.

This report is a record of work done in a school of Mexican children during a period of 6 years (1930-36), in which English (language, spelling, writing, reading), is not taught as a subject. Pupils are actively engaged in four major activities described in chapter IV. Thus, the problem in this study is the inquiry as to how successfully these bilingual children, Mexicans, acquire incidental control of the English language while engaged in a definite improvement in those activities of childhood judged by school authorities as worthy of improvement. This report will show how motive becomes dominant in a school for Mexican children—at the exclusion of motivation.

The study recorded in this report is based upon the work of La Jolla School, wholly Mexican, located in the town of Placentia, Orange County, Calif. This school is 45 miles southeast of Los Angeles.

The General Language Problem

THREE POINTS OF VIEW OF LANGUAGE STUDY ARE RECOGNIZED

THERE are three points of view from which a language may be studied: As a tool, the symbolism of which is to be mastered; as an art, with its own history, terminology, and psychology; and, in its recorded form, as a treasury of human thought and experience. Roberts and Kaulfers say (77) that this third viewpoint has exceptional possibilities for integration with other curricular activities, and provides flexibility in individual pupil programs.

When considered as a tool, language becomes largely a skill subject with the major portion of attention devoted to drill on the mechanics of speech. Languages are taught more and more as a tool or code of communication of word and thought, as well as with the cultural idea. When language is taught from the outset as a code of communication with regard for the worthwhileness of the content, the possibilities for integration with English, social studies, the arts and sciences, become infinite. This integration may be capitalized in many and varied ways.

Claude A. Phillips (70, p. 101-105) says that language is the tool that carves out the development of the ability to communicate thought and idea through words with accuracy, fluency, and effectiveness, whether the transmission is made through oral or written composition. Encourage children to a spontaneous and "happy" expression of things that interest them. Employ language games to correct speech errors. This will cultivate habits of talking clearly, distinctly, and correctly, without interfering with enjoyment or spontaneity.

Regarded as an art (78) with its own historical and psychological background, embracing its own terms and forms, language becomes an appreciation subject rather than a drill subject and the results, rightfully, belong in the attitudes, interests, and appreciation realms rather than in the field of skills. The cultural aspects of language as an art have received

scant attention in the study of modern languages and relatively little in the ancient languages. Language would seem to be man's most significant social invention and a most indispensable instrument of thought communication. Therefore the opportunity to obtain adequate knowledge of the history of language and an insight into its psychology should be provided for every boy and girl. This exposure to linguistic culture would furnish an invaluable background for enjoyment and appreciation of contacts in the student's daily life, vocational as well as avocational, in fact, wherever language functions.

That a schoolmaster's problem is to teach children those things that appear necessary to adult life is the expressed opinion of Michael West, (104) who proceeds to say that this problem must be solved even though the schoolmaster does not know what they, individually, will wish to talk about in their after-lives. Therefore, his added problems are to foretell the future and teach a nonspecific or general vocabulary that will cover a great deal of territory in the matter of future achievement.

Maintaining that all the children of all the people are entitled to that type of instruction that insures their being able to accept and to practice those ideals, customs, methods of living, skills, and general knowledge that will enable them to reach the accepted standard of living, Merton Hill (38) claims that here in America, Mexican children and those from other lands should have advantages equal to those afforded American children. This will make for a worldly success adequate to aid them in "the pursuit of happiness" and may prove instrumental in raising their economic and social status to that which has come to be representative of the best in American life.

VARIOUS TECHNIQUES OF LANGUAGE INSTRUCTION ARE IN USE

The technique of teaching languages involves several rather distinct forms, among which are: (1) Use of a basic language, (2) grammar as a basis, (3) phonetics as an instrument, (4) reading for content, (5) conversation as a direct method.

It is claimed by many accepted authorities that there exists a distinct advantage in teaching a sympathetic or basic language similar to the pupils' own. The language being familiar in spots, a pupil can jump from one familiar spot to another, finding himself, eventually, at home all along the road. There is proof apparent that certain similarities can be found in Latin, Italian, Spanish, French, German, and English. Thorndike, who has experimented in this field, approves of a constructed language (Esperanto, for instance) and states that it is easier to learn than a natural foreign one (24).

Another enthusiastic advocate of all nations meeting on a common language ground is C. K. Ogden (67) of Cambridge University, England, who proffers the opinion that if all people would learn 850 basic English words, with their derivatives, selected and listed through long experiment, they could understand and be understood in manner and degree to meet all language necessities of everyday life. His contention is that 30 words may be learned in an hour; thus, 1 hour a day for 1 month would suffice for mastery of the 850 necessary words.

Our specific problem being the learning of English by bilingual pupils, we are interested in those methods that have proved of value in the solving of that problem. Mary Helen Fee (28), a teacher in the Philippine Islands, has transmitted evidence of her success in teaching English by the grammar method. She claims that language is a matter of memory, not logic, that words must be learned and new ones firmly fixed by association. Long experiment has proven to her that the "noun" plan of teaching children names of objects, trusting that they will "pick up" verb forms more or less incidentally, is not a satisfactory method. The result is that, while pupils can read and understand English, they can neither write nor speak it with any degree of fluency. Miss Fee expresses her firm belief that the verb is the stronghold of English language instruction. This author further asserts that the quickest and most effective way of teaching English to foreigners is by the elimination of all possible nouns and the teaching of 30 or 40 verbs in all their forms and tenses. She insists, too, that a child cannot learn a language from reading, pointing out that if this were the case, the persistent readers of Shakespeare would talk language forms of Shakespeare.

Gladys Borchers (9) writes of an experiment resorted to, with 62 students involved. They were divided into three sections. The first section was taught by the grammar, or indirect, method, the second group by the direct method, and the third group by a combination of the direct and indirect methods. The recorded results were that the first section did not make outstanding progress, the second group was more successful than the first, and the third section, the one subjected to the "combination technique", made an excellent showing and far outclassed the other two. Borchers considers that chances for rapid improvement, with this combination of direct and indirect methods, appear very promising.

The results of the direct-reading approach in teaching languages is well demonstrated by an experiment made in a high school by Mamie Claraham, under the personal supervision of Dr. Junius L. Meriam (61), at the University of Missouri. He characterized the method involved as "incidental instruction." "By 'incidental' is not meant accidental, nor is the term used as synonymous with casual, chance, fortuitous, or occasional, though these are all usually listed as synonyms. The term incidental is here used

with, the idea that such instruction is strictly subordinate to the main purpose. Perhaps, the word subordinate may be here used as an explanatory synonym."

The teaching subject was first-year German; 67 students were involved. Aims were: To avoid undue emphasis on grammar; to acquire reading knowledge with appreciation; to master the use of spoken language, yet not making it a chief aim; and to adapt work to meet high-school interest. Students were divided into five sections. Sections 1 and 4 used the conventional grammar method, following closely the grammar text, while sections 2, 3, and 5 proceeded by a reading method, reading simple German story books primarily for enjoyment of stories. No grammar text was used by 2, 3, and 5. April 1 saw the grammar sections (1 and 4) with 33 of their 35 "lessons" completed. Right here an examination was given, calling for use of vocabulary, declensions, conjugations, comparisons, and the rendering of English into German. All five sections took the same examination. Immediately after the examination the sections exchanged work. After 6 weeks, at the close of the year, a reading test was given to all five sections alike. The following seemed significant: Sections 2, 3, and 5 excelled in grammar prior to that period of work devoted to grammar study. They also surpassed sections 1 and 4 in the reading test at the end of the year, with 230 pages read, as against 81 read by the grammar sections, exclusive, of course, of text.

Evidence is available, then, of the effectiveness of incidental instruction. The trend of the method is toward "emphasis on the real things of life" and points to the study of the actual "activities of men instead of the empty formalities found in most texts" (61).

Michael West (103) offers the opinion that emphasis should be placed on reading rather than on speaking. It is easier, more interesting, involves no active use of grammar or idioms, and reduces vocabulary memory to recognition. He proceeds with the opinion that in many non-English-speaking countries a child (East Indian, for example) does not need a speaking acquaintance with English, but he needs a reading knowledge, for most suitable literature available to him is printed in English. West, too, believes that a speaking knowledge of a foreign language is more difficult to acquire than a reading knowledge and that reading instruction has the effect of producing a clearer understanding of grammatical forms.

West made an experiment in India. A number of children were divided into two groups. One group was taught by strictly traditional methods. The other group was given instruction by an elastic reading method. It was discovered that the available textbooks were sadly inadequate. So, using Thorndike's list as a basis, the experimenters worked out a series of reading lessons, introducing 2 percent new words (1 new word to each 50

running words) in such a way that their repetition became incorporated, with complete naturalness, in the students' reading vocabulary. The criteria by which these textbooks were constructed and judged were two (103): (1) Words must be selected from the Thorndike list; (2) the child must derive pleasure from his study and a sense of achievement from the very outset. With these in mind, stories were introduced as early as acquired vocabulary made such procedure permissible. Words were learned by practice in reading situations, not memorized strictly as vocabularies. The less extensive the vocabulary the greater must be its utility. The most commonly used words were employed. Unusual words were used only when unavoidable, and synonyms were systematically eliminated. The teaching books were all suited to the age of the child and self-explanatory. This experiment was made with several divided groups of children. It was found that the children in reading groups advanced twice as rapidly in speech, comprehension, and reading ability as those taught by traditional methods.

LET LANGUAGE STUDY BEGIN EARLY

Elizabeth Irwin and Louis Marks (41, p. 119-120) claim that the best time to learn a language is before 10 years of age, as at that time it is difficult not to learn by reading, if the child is exposed to suitable books and properly instructed. Their claim is that, with few exceptions, children are, at the earliest age, ready to study literature. A sense of ease and content and a note of fine culture should be provided for the pupil before beginning reading in the classroom. If a child acquires the ability to extract pleasure and interest from ideas voiced in good literature from the very beginning of his studies, he will offer less resistance when the time comes to acquire symbols for these studies. Allow children to discuss freely those things of interest to them. This gives them speaking acquaintance with language. Thus they learn to talk without hesitation.

BILINGUALISM HAS BOTH A SOCIAL AND AN INDIVIDUAL ASPECT

When the people of a nation speak two languages that are related to each other (e. g. Catalan and Spanish, in Spain), the resulting difficulties are of trifling nature. Those subjected to the dual language problem understand each other with facility. On the other hand, bilingualism becomes an acute problem when the two languages spoken are of distinctly different families (e. g. Welsh and English, in England, or Flemish and French, in Belgium). Here exists a situation, due to speech conflict, that usually cloaks, if it does not openly express, a conflict of races. This antagonism does not confine itself to linguistic rivalry. Politics and religion

are, almost unfailingly, contributing factors. If those dwelling in the same land, however, can, by sincere instruction in a secondary language, meet on common ground and, by the give and take of intelligent discussion, develop common interests, then springs into life the possibility of mental, spiritual, and artistic progress for all concerned.

"If the soul of a people is so complex that two currents meet to form it, that soul will be thereby only more original, if not more beautiful" (101, p. 174). Art has always benefited by this language blending. By it, art's facets of beauty have come to sparkle more brilliantly and directly opposite qualities of both races have become endowed with new lustre and subtle transparency.

Bilingualism, in an individual, apparently presents nothing but advantages. "Languages are learned easily in childhood * * *. The gift of tongues bestowed upon him must, therefore, be made lasting. Nay, more: It must be strengthened" (101, p. 175).

When a child's intelligence unfolds under the nurturing sun of two languages, which of the two is the native tongue? Is it that one spoken in his province or is it the one he speaks at home? Such is the reflection suggested by the urgent question of bilingualism here in America.

"The conflict between localization and unification goes on everywhere and affects language as a social instrument and institution." Taking the Mayas in the southwest, for instance, it will be found that many of them have even trilingualism forced upon them. They speak Maya, almost exclusively, in their homes, learn Spanish in the mission schools, and, by compulsion, must use English in trade. If, as is so often occurrent here in America as regards Mexicans, education is the privilege of the few, there will be discovered such crass differences between the educated and the uneducated classes within a society, as to produce a kind of bilingualism that will divide the classes more surely than the true division of languages alone.

Since natural bilingualism is existent wherever two languages come into contact and the occasion for bilingualism is world-wide, would it not appear an intelligent procedure, through a properly planned and executed educational regime, to endeavor to make the foreigner within our borders feel that English would seem to be his mother tongue, even though it were of his "province" rather than of the smaller realm of his dwelling?

Anna J. Aucamp (2, p. 175) judges from experience that teaching a foreign language to young children may result in a feeling of uncertainty, if not outright inferiority. Yoshioka says that bilingualism handicaps very young children, adding that a certain amount of mental maturity is necessary to the mastery of a second language (107). Pierre Bovet (10) in his report on a meeting of the New Education Fellowship, at Nice, France, states that Saer,

Smith, and Hughes, of the University of Wales, showed that very young children were appreciably and, at times, permanently impaired mentally by bilingualism. On the other hand, Saer claims a high degree of bilingualism results from the use of a second language, especially with young children in plays and games. A more extreme view is taken in the same article by Ronjat and Meyhoffer, both at the International School at Geneva, who believe that the early acquisition of a second language is advantageous, stipulating that it is more effectively learned through play than classroom. Bovet also states that environment affects the acquisition of a second language. Whole-hearted play surroundings versus classroom imposition proved that it is during play that a secondary language vocabulary is most rapidly and permanently established. Decroly brings this opinion to the subject: Children gifted with verbal facility are not harmed by learning a second language at a tender age, but that to others its introduction might be instrumental in impairing mental development.

THE GREAT SOUTHWEST HAS A LARGE MEXICAN POPULATION

Here in the Southwest the chief concern is with Mexican or Spanish-speaking children. Since Mexico is such a close national neighbor, they are present in great numbers in the five Southwestern States: Arizona, California, Colorado, New Mexico, and Texas. Texas has the largest Mexican population, sheltering some 250,000 within her borders.

Evalina Harrington (37, p. 6), El Paso school, believes in preschool training, either at home or in kindergarten, as preparatory to reading instruction. She stresses ear training in English games, indoor and outdoor, connecting the spoken phrase, which the pupil does not know, with the activity, which he does know, as an efficient and "happy" method. Handwork develops desire to learn English, because of the necessity to ask for materials.

Annie Reynolds (76) speaks of Tireman, a professor of education at the University of New Mexico, and of his noteworthy experiment at San Jose Training School, organized to facilitate experimentation. The children enjoy many "glorious hours" while learning, by the use of music, art, drama, including puppet shows, and pageants based on real life, history, folklore, and literature. By this means the creative efforts of pupils are called forth. Work in the teaching of reading is especially noteworthy. The school maintains a lower and an upper kindergarten. Pupils enter the former at 4 years of age and the latter at 4 years and 9 months.

It is interesting to note by the declaration of J. S. Stowell (88) that the Protestant mission schools in New Mexico are extremely popular. They

find it necessary to turn applicants away. To find out why, and to apply the same principles elsewhere, would seem a most constructive work.

In Arizona, an outstanding contribution comes from Nona Rodee (79) of Tucson. She believes that speaking is the psychological basis for reading, to proceed from the known to the unknown. She bases her entire method on natural play and spontaneous activities of children.

THE COMPLEXITY OF CURRENT METHODS CHALLENGES A PROVISION FOR SIMPLER PROCEDURES

This partial exposition of language problems is sufficiently disconcerting to provoke an experimenter to try the harder to work out a procedure simple as the language itself permits and yet so effective as to surpass all others. This brief survey of procedures convinces one that no one method is satisfying to all instructors. The director of this present study is convinced that the real weakness of all methods presented in this chapter is found in their complexity. The procedure reported in chapters following is advocated on the basis of its simplicity and its effectiveness.

The Mexican Child in America

“TO THE fulfillment of the purposes of a society that wishes to have a wide diffusion of political power and a high standard of general culture, it is of the utmost importance that all constituents of that society shall be in easy and complete communication through the use of a common medium adequate to all essential demands. It is not expected, of course, that the specialized and technical vocabulary in the various fields of esoteric erudition shall be common property; nor is it expected that the ideal of perfect communication ever will be reached. The shadows of imperfect understanding will always isolate some groups from their fellows. Nevertheless, to increase the mastery of words on the various levels of a diverse and nonintegrated society is to perform a patriotic service of a high order.”

—THOMAS W. GOSLING, *National Director,
American Junior Red Cross, Washington, D. C.*

Speaking before the National Education Association, June 1935.

RACIAL BACKGROUNDS AFFECT THE SOCIAL STATUS

Many Mexicans are citizens of the United States either by birth or by naturalization. In a study of Mexican population in Texas, more than three-fourths of the children were found to be of American birth, and in excess of one-third of the parents had been born in this country (14, p, 865). Technically, then, a large proportion of Mexicans in the United States cannot be considered as aliens; yet as to race, language, social heritage, and socio-economic ideals, they have little in common with their Anglo-Saxon neighbors.

The Department of Anthropology in the University of Texas makes the following statement regarding racial strains of the Mexican immigrant: “The immigration from Mexico into Texas is, for the most part, from peon elements of the northern portions of the central plateau and of the northern coastal plain of Mexico. Probably three-fourths of the immigrants are of pure-blood Indian origin, but have been in peonage and under direct

control of the Spanish-Whites of Mexico for so long that their old tribal names and affiliations have long since been wiped out. They are, generally speaking, of essentially the same physical type as are the elements in and around the city of Mexico, who are descended from the old Toltec and Aztec populations of that region. A great portion of this early Indian population had been long inured to slavery before the coming of the Spaniards. This accounts for the readiness with which they submitted to slavery or peonage, which amounts to about the same thing, when the Spaniards took possession of their lands and attached them to the soil in imitation of European serfdom" (53).

No statement concerning racial strains—or percentage of strains—of the Mexican can be considered absolute, however, since there has been a large intermixture of pure Spanish and a scattering each of Nordic, Negroid, and Oriental bloods, until today Mexicans run the gamut, in their coloring, from blue-eyed blondness of the Nordic to the swarthy brown with the glistening black hair of the pure unmixed Indian. Most Mexicans, however, are of the darker skin type, and observation of Mexican immigrants to this country leads one to believe that here at least the blood stream is heavily Indian.

Much that has been written about the character of the Mexican has, according to Manuel, been misleading, because of a tendency on the part of observers, after only a partial view, to refer thereafter to those few individuals observed as "typical Mexicans." Or, in grasping for significant generalizations, they may—and usually do—overlook important differences. "Consider, then", he says, "the difficulty of describing personality in a population so varied in race, economic condition, and social status, as are the Mexicans in Texas. If there is one dominant note which should run through descriptions of a group so heterogeneous, it is this recognition of significant differences" (53, p. 22).

Jose Casauranc, former Secretary of Public Education in Mexico, speaks of them as the disinherited children of Mexico, saying in their defense: " * * * the Indian race which forms the nucleus of social structure of Mexico is far from deserving to be classified as inferior, because the attributes of moral loftiness and physical strength existing in races considered as superior can be found fully developed in the Mexican Indian" (14). He further attributes much of the backwardness of the "Mestizo" (Indian-Spanish) to the Mexican custom in the past of building gorgeous, ornate cities as a "front" with which to hide the deplorable conditions of its great masses of people.

From the first, the invading Spaniards assumed an attitude of superiority over the native Indian tribes which has persisted throughout the centuries. The tangible result has been an intricate and many-stepped caste system,

based almost exclusively on shades of color, with the weight of the whole ladder and its stupendous burden of poverty and misery borne upon the shoulders of the lowly Indian and his scarcely more fortunate offspring, the part-white Mestizo.

It is nearly a hundred years since obligatory primary education was established in Mexico—in theory. Actually, after a vigorous program which had its inception in 1922, the Federal state is today within sight of its goal—universal elementary education.

Until the third decade of this century, only sporadic efforts were made to achieve education for the masses; these, ending usually with the untimely death of the dictator, never lasted long enough to have an effect upon the people. Furthermore, if schools had existed universally, the peons were so poor and so in need of their children's labor that only a fraction of the people could have profited by their existence. The culture of the native Mexican had been sacrificed to the cult of civilization; many of their tribal arts were lost, others forbidden; and civilization gave them nothing to substitute for their lost culture.

As recently as 1923, Carleton Beals drew this picture of daily working conditions among Mexican laborers in their native country:

How body and soul destroying is the present Mexican wage of from a peso and a half to two pesos is to be seen by the most casual inspection of the present-day life and surroundings of the working class. The budget makes no provision for medical care. It fails to consider the tragic circumstances of families having 5, 6, 10 or more children * * *. Only the most sturdy survive, for in the capital 40 percent of the deaths are those of children under 5 years of age * * *. The Mexican family usually lives in one small, cold, dark, unfloored, windowless room, reeking with moisture and sewer gas. Outside of a faded print of the Virgin Mary, the Christ, and beneath them candles, there is no decoration upon the smudged walls. The furniture is very scanty—here again there is no provision in the budget—a few broken chairs, a rickety table, some home-made benches, a few home-woven straw mats for beds and blocks of wood for pillows—nothing more * * *. Into this room are jammed the whole family—mother, father, and children, and occasionally a roomer * * *. In sleeping the one door is always hermetically sealed, so that in less than half an hour the air is befouled, and, with the humidity and cold, promptly induces tuberculosis, pneumonia, and allied disorders.

Cleanliness under such conditions is no longer even a virtue, it is an impossibility * * *. Disease reaches out its shriveled hand of death from every corner. No opportunities exist for bathing, often no opportunities for washing clothes * * *. It is common practice to drink ditch water, however stagnant it may be, and I have seen the more poverty-stricken lap water from the gutters of the city streets (6, p. 125-127).

THE MEXICAN IN AMERICA IS HANDICAPPED

It is from this historical background, barren of opportunity, that we receive most of the immigrants who have come to us from Mexico. Whatever may have been their personal reasons for leaving the country of their nativity, they actually came here—and continue to come—in response to a

widespread demand for cheap labor. They are the cotton pickers of the southwest; they are the workers in the citrus groves and the lettuce fields; they are the little brown people that one sees in a trip across the western plains, standing by the track, pick in hand, waiting for the train to roar by before they can resume their labors.

Though they are not restless, either by choice or heritage, the nature of the work which most Mexicans perform in the United States requires them to live a nomadic life. They move from camp to camp as work demands until they have reached the point where an established home is the exception rather than the rule in a Mexican-American community.

In 1930, a committee, appointed by Governor Young of California, published a report of conditions existing in Mexican communities of that State and covering all phases of living. The following excerpt is of especial interest here (108):

A * * * housing survey made in a Mexican district in San Fernando covered 357 families, with a total of 1,668 persons, 851 adults and 817 children. The income range of the families showed 79 having less than \$400 per year; 112 from \$600 to \$800 per year; 79 from \$800 to \$1,000 per year; and 87, \$1,000 or over. A special study was made of their diet and food supplies which indicated that 35 percent had plenty of meat in their diet, 56 percent very little, and 9 percent none at all. Of vegetables, 40 percent had plenty, and 60 percent very few. Milk was received daily by 45 percent, while 25 percent took milk occasionally and 30 percent never bought milk * * *. On the home index card¹ the San Fernando district, with 25 as the standard, averaged 9.5.

A similar survey made by the Los Angeles County Health Department, covering 317 houses (an average of 40 to the block in the district studied) and 1,509 persons, revealed the following facts:

The average annual family income was \$795, almost all of the workers being classed as unskilled laborers. Of the 317 houses, 199 were owned and 118 rented, of which number 211 were rated as mere shacks and the remaining 106 as bungalows or semi-bungalows. Light and ventilation were classed as reasonably good in 154 cases, and as poor in 163 cases. Sixty-two houses had good screens, and 255 had poor screens or none. Only 10 of the houses had cesspools connected up to flush toilets, * * *. 147 had privies in fair condition, and 144 were classed as privies in poor condition. The attempt to maintain cleanliness under these difficult conditions was evidenced by the report that 227 of the houses were clean and 252 of the yards at least fairly clean. A check on food supplies * * * showed 158 houses with sufficient food, 95 in which food was somewhat lacking, and 64 in which food was distinctly scant * * *. 9 had refrigerators, 128 had screened cupboards or coolers, and the balance of 180 had no provisions for keeping food in good condition, * * *, with 25 as standard, the district averages 8.3 (108).

The health situation is just what one might expect to find in these circumstances. As a result both of their history in Mexico and of their living conditions in this country, deaths from tuberculosis alone, it was found,

¹ A scoring card used to indicate home conditions.

have increased from 14.8 percent of the total number of deaths from that disease to 21.2 percent during the years from 1921-29, with the peak year, 1924, showing a 24 percent ratio (108, p. 186).

The infant mortality rate is even less favorable. Figures are given for the years 1916-29, inclusive, and show the following conditions: In 1916, the infant mortality rate among the Mexican population was 285 per thousand live births, or more than four times the rate of the other white population. In 1918, the unfavorable ratio rose to the point at which one-third of all Mexican babies born died during their first year. This was five times as great as infant mortality among other white babies. Since that year, chiefly because of the increased activities of the county health department, the conditions have improved—though not steadily—and in 1929, statistics revealed that the Mexican rate of infant mortality had been reduced to a point at which approximately 9 babies out of 10 born in a Mexican community survived their first year of life. Even this figure, though, is disproportionate, for the Mexican infant mortality rate was still, in that year, between two and three times as great as for white infants (108).

THE MEXICAN CHILD IN THE AMERICAN SCHOOL IS USUALLY RETARDED

Obviously, children emerging from such greatly handicapped homes are going to be put to a severe test in school, however favorable that environment may be. According to statistics quoted heretofore, they have a better than even chance of being undernourished, their physical environment permits only limited opportunities for sanitation, or even decent personal cleanliness, and their living quarters are deplorably overcrowded. Furthermore, the language of their homes is Spanish, English being used only at school. In addition to this, the Mexican child in a "mixed" school is frequently the victim of strong race prejudice on the part of his fellow pupils, and, it is occasionally reported, at the hands of the teachers (90). In view of all this, Mexican children achieve a surprisingly high percentage of attendance in the public elementary schools, but the tendency is to leave school at the age when attendance is no longer compulsory.

Taylor, in his study of Mexicans in the Imperial Valley, states:

Poverty, manifested in a variety of ways, social ostracism, and retardation, coupled with insufficient appreciation of the advantages of education to offset the effects of the first three obstacles, are thus the principal factors keeping some Mexican children out of school, and discouraging most of them from continuation beyond the age limit of compulsory school attendance (90, p. 76).

And he reports that in 1926 the total enrollment of Mexican pupils in high schools of the Imperial Valley was only 51 (30 of these being in

Calexico, where there are many middle-class and upper-class families). These 51 children represented only 4.1 percent of the total high-school enrollment for the Valley, whereas they represent a racial group which constitutes more than one-third of all the inhabitants of that area.

Numerous tests have been made with the intention of revealing the relative abilities of Mexican and other white children in schools throughout the Southwest. Owing to the fact that all of the tests used were originally designed for English-speaking children, a legitimate question arises as to their reliability when applied to children for whom English is a "foreign" language. •

H. T. Manuel, showing statistical results of the National Intelligence and Stanford Achievement Tests administered to children in El Paso and San Antonio, interprets the findings as follows:

* * * the Mexican pupils are on the average about a year older than the other whites; that in spite of this greater age the Mexicans test 7 points (about a half year of mental age) under the other whites on the National Intelligence Test; that the average Stanford Achievement score of the Mexicans is 4 points (a little less than one-half year of educational age) lower than that of the other whites; that there is little or no difference in the average scores in arithmetical computation; that while the variability of the ages of the Mexicans as measured by the approximate range of the middle 50 percent is a half-year greater, there is little or no difference in the variability of the test scores; and, finally, that conditions in a single section are apt to vary widely from the average conditions. An examination of the tabulations on which the table is based shows a great deal of overlapping in the distributions of scores of the two groups (53, p. 29).

The Pintner-Cunningham Primary Mental Test was administered to children in 45 kindergartens and first grades in El Paso, the results giving English-speaking children an advantage of 23 I. Q. points over Mexican children. In this interpretation, however, Manuel advises caution:

It is not claimed that this is representative of the whole city. Moreover, one does not know how well or how poorly adapted to Mexican children this test is, even when the directions are translated into Spanish as they were in the tests in the Mexican schools (53, p. 32).

The results of the Thorndike-McCall Reading Test administered to fourth- and fifth-grade pupils of the Brownsville schools indicate that the Mexican children "are almost uniformly older on the average and more variable in age than are the other white children. * * * In general, the Mexican children show greater variability than other white children in arithmetic and geography and less in reading, while the evidence in spelling is conflicting. An unexplained condition is the failure of the score of the Mexican children in reading to advance in either section of the fifth grade" (53, p. 33).

Manuel is led to believe, from first-hand observation and from evidence presented, that while the average Mexican may not be more gifted in the

arts than the average white child, there are, nevertheless, outstanding examples of exceptional gifts among the Mexicans, which often go unnoticed merely for lack of financial aid in developing them. Regarding scholastic abilities of the Mexican child, Manuel concludes his summary as follows:

From the standpoint of education it can hardly be emphasized too strongly that the problem is an individual one. To determine the abilities and possibilities of a given child, it is necessary to consider him individually. There are many Mexican children who differ radically from the group tendency in every trait which is alleged to differentiate the group (53, p. 37).

The teachers from eight districts in Texas with heavy enrollment of Mexican children were asked to divide a given class into three sections on a basis of scholastic averages, recording the number of Mexican and non-Mexican children in each section. This survey, which included 1,263 children, 312 of whom were Mexican, revealed that the general tendency of Mexican children was to fall into the lower two-thirds of the group, as follows: Lowest third, 36 percent; middle third, 38 percent; and highest third, 26 percent. Inasmuch as figures for non-Mexican children are not given, no comparison of the two groups can here be made (53, p. 26).

In his study of Mexicans attending high school, Manuel introduces evidence to attest that those pupils who do continue beyond the elementary grades are superior students. His figures indicate, also, that in El Paso (where the study was made) there is a constantly growing interest in secondary education—a condition that can be duplicated in practically all school districts in America. During the 31 years from 1887 to 1917, only 16 Mexican pupils (less than 3 percent of the total enrollment) graduated from the El Paso High School. The years from 1918 to 1927 saw an increase of Mexican pupils to slightly more than 6 percent of the total enrollment. Most interesting is the fact that 14 percent of the honor students during that period were Mexican, a favorable disproportion of nearly 8 percent (53, p. 34).

These fortunate ones, of course, represent only a handful when one considers the total Mexican population of the Southwest. And—to whatever cause the fact may be ascribed—there is little question that, by the yardstick of our present testing methods, the average Mexican child falls behind his non-Mexican schoolmate in academic achievement. The consensus, as is indicated above, seems to be that a considerable amount of retardation of the Mexican children should be attributed to a language handicap. To what extent this can be measured, no one is sure, for other elements have a bearing upon the scholastic abilities of children. Undoubtedly home environment has an effect upon the mental development of children. Hill, in his studies, has shown that the average home environment of the Mexican child is barren of all cultural stimuli.

Procedures and Source Material in This Study

THE MAJOR PORTION OF THIS STUDY IS CENTERED UPON THE VOCABULARY USED IN A MEXICAN SCHOOL

INASMUCH as reading, writing, spelling, language, composition, and grammar, as phases of English, are not taught as such subjects in this Mexican school, decision was made to center attention in this study upon the vocabulary used by teachers and by pupils. The bulk of vocabulary used would be found in the oral work as carried on between teachers and pupils. But stenographic records, if extensive, would call for more time and expense than allotted to the investigation. A little of such material is reported in chapter V. Very extensive vocabulary might be discovered by recording words in the books read by these Mexican pupils. The school has a library of approximately 500 volumes. A large number of the books have been read by pupils who continue in the school into the upper grades. To tabulate the words used in books read by even the younger pupils would require more time and money than were provided for the study.

Aside from the limited stenographic material referred to above, the vocabulary studied has been taken from the written work of the pupils of the school during the years 1930 to 1937. Most of these papers during the first 6 years had been preserved in Professor Meriam's curriculum laboratory. The amount of written work is not as great as might be expected in such a public school. Explanation for this is given later in this chapter. A minor portion of the data in chapter V records errors in spelling and defects in language structure.

A survey was made of several vocabulary studies, to determine a technique suitable to the tabulation of the written vocabulary and the oral vocabulary of the pupils themselves, as well as of that vocabulary to which they are exposed. Ernest Horn (40) sets up four purposes in his study: First, to make available a list of the 10,000 words most often used in writing done in the United States outside of school; second, to summarize and evaluate the investigations utilized in determining these words; third, to discuss the

most important problems and techniques involved in this type of vocabulary research; and, fourth, to show how this list of words can be used, not only for practical, but for scientific purposes.

Suggested uses of the material compiled by Horn are: To improve children's dictionaries; to aid in teaching English to foreigners; and to aid in curriculum making.

The word study made by Thorndike (96) was for the purpose of determining the number of words a child should know at the end of the eighth grade. The data were based on reading material used by children. In this study Thorndike did not include proper names, names of small towns, places, or abbreviations. Plurals were counted with singulars and listed as the same. The result of the study was *The Teacher's Word Book* (95), one of the lists against which the La Jolla vocabulary was checked. *The Teacher's Word Book* is used today as an aid to teachers in determining treatment appropriate for teaching, and as an aid to teaching English to foreigners. The first 1,000 words on the word list are a basis for a standard vocabulary for teaching English to foreigners.

The purpose of the vocabulary study made by Gerlach (32) was to make observations of the growth and size of vocabularies, as well as the relationship between the size of the vocabulary and arbitrary grades, age, and sex. A record of a 3-year-old child indicated that his vocabulary consisted of 1,771 words. Similar but limited records of the number of words used by 4- and 5-year-olds indicates that children probably have working vocabularies of from 1,000 to 6,000 words. Tests have been made to determine the size of vocabularies other than through methods of recording. A Minnesota superintendent employed a method with eighth-grade children of checking words known in a dictionary. The method used by Gerlach in securing his vocabulary data follows. He selected 1,000 words from Funk and Wagnalls *New Standard Dictionary* (taking the first word of the third column of every third and thirtieth page). The true-false method was used in 600 cases; and in the remaining 400, subjects were asked for their own definitions. A vocabulary index (32, p. 47-48) was established and as the 1,000 words selected were representative of 250,000 words the results were multiplied by 250.

James H. Smith (86) made a study of the vocabularies of children: (1) To determine differences of various residential groups; (2) to add to data already available on written vocabularies; and (3) to study errors and their persistence in the most commonly used words. Class papers numbering 2,711 in the different school subjects provided data for the study. Whereas most previous studies eliminate geographical names and names of persons, this study included them as they present a real problem in spelling to school children. For the same reason plurals and words derived from basal

words were included. An example of difficulties children have may be seen in the words *story*, which was misspelled in 6 out of 179 attempts, and *stories*, misspelled in 5 out of 29 attempts. Words were tabulated with their errors, in a form similar to that found for written vocabulary in chapter V:

Residential influences do not seem to affect formation of children's vocabularies. Errors seem to increase from second to eighth grade, with some so-called "demons" persisting throughout.

LA JOLLA SCHOOL (MEXICAN CHILDREN) SUPPLIES THE MATERIAL FOR THIS STUDY

In June 1930, arrangement was made by the district superintendent of the schools at Placentia whereby Professor Meriam was given the opportunity to direct the work at La Jolla School. He had been unfavorably impressed by the great effort made by both teachers and pupils in the schools of southern California, where many Mexican and Japanese children are enrolled. These Mexican children come to school at the age of 6 or 7, with scarcely any acquaintance with the English language. The Spanish-Mexican language is their mother tongue, used in all their home and community communication. School administrators and school teachers have regarded this language situation as a serious handicap to these children. Quite naturally, then, these school authorities provided 1 year, or even more, in which time these foreign-tongued children might be given instruction in English. But to learn a foreign language without the actual functioning of that language in the normal activities of these little people called for a real struggle on their part, and to motivate this learning through activities arranged for that purpose—and indeed through a variety of other devices—called for a real struggle by the teachers.

To avoid this superfluous struggle on both sides, but primarily to help the Mexican children develop more positively in the normal and wholesome activities of American life, was the problem for solution in this school. Inasmuch as the work of the school was conducted by the use of the English language, it was expected that the pupils would readily acquire this foreign language by its constant use.

A study made by Meriam prior to 1915 supports this theory (60). Pupils in the experiment then in progress for 10 years at the University of Missouri had no subjects of arithmetic, grammar, geography, etc. They studied nature and industrial activities; they studied how to play games better and for more fun; more than one-fourth of the day was devoted to the enjoyment of stories and songs; a fourth subject was hand-work, which was given considerable emphasis. Statistical studies of the scholastic grades won by pupils of this school when, later, they were high-school

students, show their superiority in mathematics, English, and other subjects, over classmates who came from the traditional grade schools. Further records were reported 5 years later (58).

A similar report was made (62) relating experience with a Japanese student and also with Mexican children. Formal subjects were acquired *incidentally* while the pupils worked upon activities of direct value to them, in which these formal subjects functioned. Explanation is found in the discussion of "motive" and "motivation" in chapter I, and will be further considered in chapter VI.

La Jolla School was to open in September 1930, with the same three teachers as in preceding years. Seventy-five pupils were expected. The school occupied a three-room modern brick building. This building contained also a well-equipped toilet and shower-bath room for the girls. The boys were much less favored. Their toilet was a somewhat modernized outhouse, and in the vacated one-room school building of earlier years a bath-tub was placed. Ten acres of level sand afforded plenty of playground—of a sort—surrounded by orange groves. Since 1930 this school has expanded from one of 3 teachers in 3 rooms, with 80 pupils in grades I and II, to the present school, of 6 teachers in 7 rooms, with 185 pupils in 8 grades.

The school is located on the edge of Placentia, Calif., a small but very prosperous town in Orange County. The population of Placentia is composed of Americans and Mexicans, the majority of whom are orange growers, packers, or pickers.

The main building is of red brick. Four smaller bungalows are nearby, providing a woodwork shop, cooking room for the girls, an observation room, and an art crafts room, all surrounded by orange groves. A large playground gives ample space for games of all kinds in which the pupils participate. All games and studies are supervised by six capable and understanding teachers who know intimately all of the pupils, thus enabling them better to cope with their difficulties and to obtain for themselves the education essential for a normal wholesome life.

All of the pupils of La Jolla School live in a small Mexican section near the school. Here we find a general store, a gasoline station, a handball court, and several blocks of houses. The houses are rather neat in appearance, although without rugs on the floors; some are nicely furnished. Educational material is totally lacking in the homes.

How does the life of these people compare with the life of Americans living in Placentia? A bit of Mexico transplanted in America incorporates many American characteristics but never completely loses the stamp of Old Mexico. A mixture of American and Mexican ideas, customs, and traditions is apparent in all phases of the lives of these people. In some the

Mexican influence is dominant, while others are almost completely Americanized. Although we do not find in many of these homes the luxuries which the more educated Americans have, there exists the typically Spanish hospitality and courtesy, a strong family tie not found in some American homes. Upon entering their homes, the visitor is treated with a courtesy unexcelled. The unity of the family is noticed during the walnut picking season, when all members of the family from the smallest baby to the oldest member work together in the orchards.

The parents, many of whom were born in Mexico and neither speak nor understand English, display an interest in the education of their children. They attend the Parent-Teacher Association meetings and school programs in which their children have a part. Like the American parents, they seem to want for their children what they themselves were unable to have. Most of the men are laborers, working in the orange groves or other labor in Placentia; some are unemployed.

The Mexican, with his racial "mañana" reputation, must have some time for amusements. In La Jolla a very friendly spirit prevails, because the inhabitants know each other well; many are related. Therefore there are many good times at home.

What are the characteristics of the pupils of La Jolla School? There are approximately 180 children in the school, ranging from 5 to 16 years in age. They show in many ways the effect of their training at school. They are taught to do better those activities in which children normally engage. The smallest kindness is appreciated and remembered. These children are extremely lovable and sensitive—very responsive to any attention shown them. This, perhaps, is due to the fact that most of them are from very large families; at home there are so many children that the parents are unable to devote much time to each one.

The work under the direction of Professor Meriam opened in September 1930. The school then had three teachers, three rooms, and three groups of pupils. The 3 groups, composing 75 pupils in all, had been designated:

1. Prefirst—which included all the beginners and all those not yet able to "do" first-grade work.
 2. First grade
 3. Second grade
- } These two grades included pupils from 8 to 16 years of age.

Each of the three teachers had one of these groups throughout each day according to school customs. The work of the school was the traditional curriculum for the first two grades.

With full freedom granted by the district superintendent, the county superintendent and also by the State superintendent, a sweeping change was made. The principal was asked to take each group one 60-minute period each day in the enjoyment of stories and pictures. A teacher

supervised each group one period each day in playing games. Another taught each group daily in handwork. The hour from 10 to 11 each day was divided into three parts, each group having 20 minutes in folk-dancing and song. Baths were taken throughout the day by individual schedule.

The following year the "prefirst" was discontinued and four grades—or groups—were arranged. A fourth teacher was added. From 1934 to 1936, there were five teachers and six grades. In September 1936, a sixth teacher was appointed and the school organized on the basis of eight grades. From the time the fourth grade was organized group IV, and later the upper grades, had a fourth subject, namely, Observation—similar to the better known "social studies" but more inclusive. In the first three grades the children enjoy games. In grades 4 to 8 games are a playground activity and the observation period replaces the play period.

In 1930 the three teachers occupied a modern three-room brick schoolhouse. With the appointment of the fourth teacher, the old one-room country schoolhouse, still on the school grounds, was reopened. It is now used as a woodshop for boys. Later, a small country schoolhouse—vacant for some years—was moved to the school grounds and put in order for use by the girls as a laundry, a cooking room, and teachers' lunchroom. Two more single-room bungalows have been added, one for "social studies" and one for art crafts.

The program of work consists of four major subjects supplemented by four minor ones. (See later chapters.)

MAJOR

1. Learning to play wholesome games (for grades I, II, III, and sometimes IV).
2. Learning to make things, both useful and ornamental.
3. Learning to enjoy good stories, including songs and pictures. (Stories are enjoyed through hearing, telling, reading, dramatizing, etc.)
4. Learning much about the complex environment, near and far, affecting child life (little used in grades I, II, and III).

MINOR

1. Singing for the delights of song.
2. Folk dancing, which all enjoy.
3. Bathing—usually each one a bath daily.
4. "Free-play" (under supervision) on the playground.

These four major and four minor subjects are normal activities of children, worthy of being improved. This is the work of the school. Here is evidence that, as asserted in chapter I, English as a school subject is not taught in this school. But these pupils do learn to read, just as they learned to talk when they were 2, 3, 4, 5 years old—whenever talking was needed.

Similarly, these Mexican children do acquire ability to write and to cipher. They acquire geographical, historical, scientific information—never as the traditional school subjects, but strictly as such skill and information are needed in their four major and four minor activities.

A statement of the educational principles by which this work is directed is given in chapter VI. It is important to present, at this point, a few excerpts of the plans and directions prepared for the teachers and a few samples of stories and written work done by pupils. These plans and written work are the sources for the vocabulary constituting the main study in this project.

First-grade pupils play "roll-ball" with a variety of rubber balls. They talk about their game, for the purpose of improving their playing. For the same purpose the teacher writes a story:

We stand in one large circle.
All at once we roll our balls.
See them roll. Oh my! Oh my!
They go in all directions.
We all stand still until all the balls are still.
Then we pick them up.

This story is simple—easily read, because the oral vocabulary is familiar and definitely functions in this game. In a third-grade game of cylinder relay, ring-toss, or tenpins, the playing becomes rather complicated and the vocabulary much extended. At irregular times, depending upon various circumstances, the pupils copy these stories, frequently including a score card. Here is one illustration:

Oh boy—watch the tenpins.
Over they go so easily.
And see how they knock each other over too.
Just roll the ball now and see what happens.

In the fourth or fifth grade a study is made of "California products." The first two pages of the supervisor's plan for the teachers are here quoted:

LA JOLLA SCHOOL, GRADES IV-V

TOPIC—CALIFORNIA PRODUCTS

What products does California produce?

Make up as long a list as possible of products raised or secured in California.

PRELIMINARY WORK.

1. Begin this list in a conference. As pupils name products, e. g. cotton, oranges, nuts, oil, etc., the teacher may write them on the blackboard, in the order named. Accept only those products named where there is no question as to their production in this State.

2. When about 40 products are thus listed on the board, show pupils the importance of alphabetical order. See that these pupils understand how to alphabetize. Then, merely as an exercise in preparation for use right soon, let each pupil put the 40 products in alphabetical order on a sheet of paper. Emphasize that this work must be done with care, each writing as best he can. As the more capable finish, let each help a less capable pupil.
3. When all this "exercise" has been completed, the teacher assigns to each pupil (in any manner she pleases) one word in this list. Each pupil checks this on his own list. One fresh sheet (standard size is preferable) of the best paper of the school is now given to each pupil. He writes his word at the top of the page near the center. (No other written word on this page at this time.) This word must be written carefully; the very best the pupil can do. (The initial letter of each word is to be capital.) In this written work, let the teacher supervise to effect the best work possible.
4. Collect the "exercise" lists and file in alphabetical order by pupils' names. (Assign a pupil to do this.)
5. Collect the papers with one word on each. File these in alphabetical order, by name of the product. A filing case is to be arranged for these 40 sheets, which are soon to increase to 200 and more.

FINDING AND LISTING PRODUCTS.

After the above "preliminary work" has been done, the pupils are ready to look further for other products of California.

1. Look in geographies, encyclopedias, books, circulars, etc.
2. As additional products are discovered, the finder may write such upon the blackboard or paper (as teacher provides). From this point on, the pupil must have ready access to the "products file," so that he will not repeat products already listed. (Ready and rapid use of alphabetical order is now recognized by the pupils.)
3. The teacher may now arrange to have the "products file" increased as new products are discovered. This file is not to be finished in 1 or 2 days—accessions will be made almost throughout our study. This "file" must be arranged so as to be readily accessible, and all pupils must use it much—but with great care. Various difficulties are soon to arise as to this "file." For example: What products are to have a page in this file? Fruits, vegetables, minerals. Each of these has subdivisions: Oranges, peaches; carrots, potatoes; gold, zinc. This "file" is for our use—therefore insert "fruits", "oranges", "vegetables", "carrots", etc.

GEOGRAPHICAL LOCATION OF PRODUCTS.

Begin this study by an outline drawing of this State.

* * * * *

The critical reader may question the need for any written work by the pupil. It is frankly claimed that oral work is by far more important and teachers must be on guard lest written work be done as an exercise in writing. La Jolla School pupils do very little writing. Here is one piece of written composition quite typical.

WHAT THE PLEDGE OF ALLEGIANCE TO THE FLAG MEANS TO ME

The pledge of allegiance means something like shaking hands, we salute the flag. And say the pledge of allegiance. We should think of what we are saying. The pledge of allegiance reminds us that we are free to talk as we please. And to do what we please as long as we respect the rights of others.

Almost no writing is done in grade I. Pupils in grades II and III write quite a bit as a part of their games and somewhat less in making record of hand work. Grades IV to VIII write more than earlier grades—largely in their studies of environment and some of their hand-work study. Very little writing is called for as a part of their enjoyment of stories.

The teaching of English—or much better in this case, the *learning* of English by pupils—is strictly incidental to the fundamental objective throughout this school, viz, improvement of the pupils' activities in normal life. To what extent this school is accomplishing its objective is not being studied at this time. If it be statistically indicated (in ch. V) that these pupils do creditably in English, when compared with the norm for American schools, the same is evidence that this school has accomplished the objective of the traditional school.

The reader will be convinced that the activity program of La Jolla School is not used, as in most schools, to *motivate* the learning of English. Whatever of English is acquired by these bilingual children is strictly incidental to the accomplishment of a larger objective—the improvement of the normal activities of children.

Vocabulary Data in This Study

ENGLISH AS STUDIED IN THIS PROJECT IS LARGELY LIMITED TO VOCABULARY

THE term "English", as used in the title of this study, might include reading, writing, language (oral and written), spelling, composition, grammar, rhetoric, and literature. It seems quite obvious that to investigate all these phases would be impossible in this one study. On the other hand, English might have no reference at all to those school subjects. It might refer only to the language used by the unschooled. It might even be limited to the oral language used.

It was decided to center attention upon objective materials within reach, which had already been collected, rather than to spend much time in collecting more materials and study them with less care. Moreover, it was readily agreed to limit this study, in the main, to vocabulary, allowing this to represent the whole range of English. This view seemed the more plausible in this particular case, that of bilingual children acquiring English. Perhaps it is even yet more plausible when these children are of the industrial and labor class. The English they are to use is very little of the grammar and rhetoric type. It is little more than vocabulary.

The vocabulary to which the pupils in this Mexican school have been exposed in the school consists of: (1) The language used by the teacher, (2) the language used by pupils, (3) the books which pupils have read, and (4) in a measure the written work of the pupils. The school could provide more of the written material than could be provided for 1, 2, or 3. On this material the center of attention in this study was placed. An extended study of the language used by teachers was included in the original plan, but time permitted only a slight study of this phase. Similarly, a very little study of the oral language used by pupils is included. It has not been possible even to touch the vocabulary to which pupils are exposed in their extensive reading.

The data in this chapter consist of: (1) Oral vocabulary by teachers, (2)

oral vocabulary by pupils, (3) written vocabulary by pupils, (4) spelling and language errors by pupils, (5) quality of handwriting.

THE ORAL VOCABULARY USED BY TEACHERS SECURES A VARIED RESPONSE BY THE PUPILS

The oral vocabulary used by teachers, as recorded in tables 2, 3, 4, and 5, is presented as merely representative. It was impossible to obtain the extended records really needed to present adequately the English to which these Mexican children were exposed in their school work. In each grade, the limited number of periods is indicated in the tables. Sufficient, however, is given to indicate something of the character and scope of language used by teachers as one means of achieving progress in the acquisition of English by these bilingual children.

As pupils progress in the grades, it may be expected that the vocabulary used by the teacher will become more advanced in both character and quantity, due to both the maturation of the pupils and the more advanced work to be done. However, the reader is cautioned in comparing the number of running words and the frequency in use in tables 2, 3, 4, and 5. Records were not taken over the same periods of class work. For example, 776 different words were recorded for first-grade teachers during 20 periods, while 376 different words were recorded for second-grade teachers during 4 periods.

ORAL VOCABULARY USED BY TEACHERS WITH FIRST-GRADE PUPILS

The children entering the first grade speak and understand only a few words of English, as Spanish is the language used at home. But, as indicated elsewhere, the teachers in this Mexican school disregard the possibility of a language handicap on the part of the children. Emphasis is placed at once upon the activities scheduled for the school program. Pupils play with rubber balls, under direction of the teacher, where example is more immediately directive than words, though the English language accompanies the teacher's action. Vocabulary used by the teacher is naturally more limited and the frequency in use of words is much less than with normal English-speaking children.

Soon after the opening of school in September, stenographic reports were made of the teachers' vocabulary as used during 20 1-hour periods as they worked with pupils in the different classes. Only a representative view of the vocabulary to which the beginning child is exposed is thus given. The teacher exposes these beginning pupils to a range of vocabulary sufficiently varied to enable them to carry on their school work as briefly described in chapter IV. During the 3 months within which the oral vocabulary used by the teachers of these first-grade pupils was col-

lected, a running vocabulary of 16,097 words was recorded, involving 776 different words in stories, handwork, and other class activities. This indicates a repetition of each word on the average of 20 times. A word which functions to a great degree is more readily learned.¹

TABLE 2.—*Oral Vocabulary Used by Teachers with First-Grade Pupils, 1936-37* *

Word	Frequency	Word	Frequency	Word	Frequency
a	332	bank	7	bread	9
about	14	basket	5	break	1
after	10	be	129	breakfast	1
afternoon	6	bead	3	bring	61
again	40	beads	41	briskly	2
all	75	bean	21	brought	2
almost	1	bear	6	brownies	1
along	5	beat	2	brush	30
already	1	beats	1	bucket	2
alright	38	because	6	buggy	6
altogether	2	bed	14	but	26
always	2	bee	1	butter	4
am	77	beef	1	by	40
an	9	been	2	bye	17
and	614	before	2		
another	8	began	8	cake	2
any	14	beginning	1	call	7
anybody	7	behind	3	calls	1
anyone	2	bend	3	came	10
anything	1	beside	1	can	76
apple	14	better	12	candle	10
apples	3	bicycle	2	candlestick	14
are	94	big	22	can't	9
aren't	4	bill	1	cap	2
arm	3	birdie	2	car	1
arms	19	bit	1	carry	1
around	12	black	5	cars	1
as	11	blew	1	cart	3
ask	2	block	1	cat	3
asleep	4	blocks	7	catch	2
at	34	blow	4	center	1
away	23	blue	27	chair	87
awhile	1	boat	2	chairs	30
		book	18	chew	1
baby	31	books	1	chicken	1
baby's	6	both	1	chickens	2
back	52	bounce	2	children	1
bad	3	bouncing	1	chin	10
bag	1	bowl	2	choosing	1
bags	1	box	17	chopper	2
ball	101	boy	81	chose	1
balls	3	boys	89	Christmas	12
banana	7	branch	1	circle	20
bananas	4				

* This is the oral vocabulary which the teachers used with first-grade children during 20 periods of 50 minutes each.

The reader is reminded of the description of this school given in chapter IV, where it is seen that the first grade pupils usually have as many as four different teachers each day. Naturally the vocabulary used would be of greater range than with one teacher as in the traditional school.

TABLE 2.—*Oral Vocabulary Used by Teachers with First-Grade Pupils,*
1936-37—Continued

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
clap.....	20	drove.....	1	further.....	1
climb.....	4	drum.....	1	game.....	1
close.....	1	dry.....	2	garden.....	1
cock.....	1	duck.....	2	get.....	48
cold.....	2	dumpling.....	2	getting.....	1
color.....	27			girl.....	41
come.....	78	each.....	6	girls.....	99
corn.....	5	ear.....	2	give.....	24
corner.....	19	early.....	7	giving.....	2
coughing.....	1	ears.....	13	glass.....	4
could.....	7	easier.....	1	go.....	129
cow.....	12	eat.....	11	goat.....	16
cows.....	1	eating.....	17	goes.....	22
crackers.....	1	eggbeater.....	3	going.....	82
crayola.....	5	else.....	35	gone.....	1
crayolas.....	4	English.....	5	good.....	245
cries.....	1	enough.....	1	goodbye.....	45
cry.....	8	every.....	1	got.....	15
crying.....	1	everybody.....	57	grade.....	5
cup.....	7	everyone.....	2	grape.....	4
cupboard.....	6	everything.....	2	grapes.....	8
curds.....	4	excuse.....	3	grass.....	4
cutting.....	1	eye.....	3	great.....	3
		eyes.....	31	green.....	17
dame.....	2			grey.....	1
dapple.....	1	face.....	4	guess.....	2
day.....	2	faces.....	1	gum.....	9
days.....	4	fall.....	6	gun.....	1
dear.....	15	far.....	1		
desk.....	3	farmer.....	1	had.....	4
did.....	25	father.....	1	hammer.....	6
didn't.....	4	fast.....	5	hand.....	1
dirty.....	3	feet.....	19	hands.....	133
dish.....	5	fine.....	17	happened.....	1
dishes.....	5	find.....	6	hard.....	5
do.....	124	fingers.....	7	has.....	21
does.....	22	finished.....	11	hat.....	7
doesn't.....	1	first.....	23	have.....	99
dog.....	11	fix.....	2	haystack.....	2
doggie.....	1	fixed.....	1	he.....	37
dogs.....	1	floor.....	6	head.....	35
doing.....	4	fold.....	3	hear.....	6
doll.....	2	folded.....	1	heard.....	3
dollars.....	1	foot.....	27	heels.....	1
dolls.....	1	for.....	62	hello.....	2
dolly.....	25	fork.....	5	help.....	2
dolly's.....	1	four.....	3	hen.....	1
don't.....	17	fox.....	7	her.....	38
door.....	5	frightened.....	4	here.....	287
down.....	78	from.....	2	here's.....	7
draw.....	4	front.....	7	her's.....	1
drink.....	12	full.....	1	he's.....	2
drinks.....	1	funny.....	4		

TABLE 2.—*Oral Vocabulary Used by Teachers with First-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
high.....	2	ladies.....	1	minute.....	15
him.....	12	lady.....	2	mire.....	2
hire.....	2	lady's.....	1	miss.....	15
his.....	40	lane.....	1	mittens.....	9
hold.....	3	lashed.....	2	moment.....	1
holds.....	1	last.....	2	money.....	5
home.....	12	leave.....	1	more.....	25
hop.....	3	left.....	2	morning.....	149
hopping.....	1	lend.....	2	most.....	4
horn.....	4	lent.....	1	Mother Hubbard.....	1
horse.....	3	let.....	22	mouse.....	3
horses.....	1	let's.....	123	mouth.....	14
hot.....	13	letters.....	2	move.....	5
house.....	18	light.....	5	much.....	
how.....	7	like.....	85	music.....	2
humpty-dumpty.....	7	lines.....	1	must.....	4
hung.....	2	listen.....	26	my.....	145
hurry.....	8	little.....	206	myself.....	5
hurt.....	2	long.....	2		
I.....	331	look.....	45	nail.....	1
I'd.....	1	looked.....	9	nails.....	5
idea.....	1	looks.....	4	name.....	18
if.....	14	loop.....	12	naughty.....	6
I'll.....	6	lord.....	1	need.....	3
I'm.....	8	lot.....	1	never.....	2
in.....	152	lots.....	2	new.....	1
Indian.....	1	loud.....	1	next.....	2
inside.....	1	louder.....	1	nice.....	61
into.....	3	loudly.....	1	nicely.....	2
is.....	370	low.....	1	night.....	7
isn't.....	5	made.....	2	nimble.....	47
it.....	160	make.....	46	nine.....	4
it's.....	8	makes.....	4	no.....	49
Jack Horner.....	51	making.....	3	nobody.....	2
jax.....	73	mama.....	3	noise.....	4
jeans.....	1	man.....	4	none.....	1
jump.....	6	many.....	6	nose.....	1
jumped.....	1	mark.....	1	not.....	48
just.....	34	master.....	3	nothing.....	2
keep.....	3	May.....	5	now.....	220
kettle.....	9	maybe.....	3	nurse.....	7
kindergarten.....	7	mayor.....	1	oatmeal.....	1
kitten.....	6	me.....	41	of.....	41
kittens.....	10	meadow.....	2	off.....	5
knees.....	2	meadows.....	3	oh.....	33
knife.....	4	men.....	4	old.....	7
know.....	17	Mickey Mouse.....	2	on.....	121
knows.....	4	middle.....	3	once.....	19
ladder.....	4	might.....	1	one.....	119
		mile.....	2	ones.....	1
		milk.....	11	open.....	3
		mine.....	5	or.....	9

TABLE 2.—*Oral Vocabulary Used by Teachers with First-Grade Pupils,
1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
orange.....	13	quick.....	5	shovel.....	2
oranges.....	3	quckly.....	2	show.....	9
other.....	7	quiet.....	7	shut.....	14
our.....	32	quietly.....	1	sing.....	109
out.....	52			singing.....	3
over.....	54	rabbit.....	9	sings.....	2
owl.....	1	rake.....	1	sir.....	2
		ran.....	1	sit.....	77
painted.....	1	reach.....	3	sits.....	8
pair.....	1	ready.....	30	sitting.....	3
pan.....	2	real.....	6	skip.....	20
papa.....	1	red.....	57	sleep.....	5
paper.....	35	reds.....	1	snap.....	7
papers.....	4	remember.....	9	snaps.....	1
partner.....	2	repeat.....	19	so.....	42
pass.....	1	rest.....	1	soap.....	1
peg.....	1	ride.....	2	socks.....	8
pencil.....	3	rides.....	1	softly.....	3
pencils.....	1	right.....	54	soiled.....	5
people.....	4	roast.....	1	some.....	55
person.....	2	rock.....	3	somebody.....	2
petals.....	2	rock-a-bye.....	2	someone.....	6
piano.....	8	rod.....	1	something.....	11
pick.....	47	roll.....	6	son.....	2
picking.....	1	room.....	1	song.....	11
picture.....	16	round.....	10	soon.....	8
pictures.....	13	rude.....	1	sore.....	3
pie.....	17	run.....	4	sores.....	4
piece.....	5	running.....	3	sorry.....	2
pig.....	6			sounds.....	1
pigs.....	38	said.....	22	Spanish.....	1
pin.....	5	same.....	1	spider.....	5
pitter-patter.....	20	sang.....	2	spill.....	1
place.....	4	sat.....	34	spoon.....	14
places.....	3	Saturday.....	6	squirrel.....	3
plain.....	1	saw.....	1	stairs.....	7
plate.....	9	say.....	121	stand.....	67
play.....	41	says.....	14	stands.....	1
playing.....	1	school.....	8	stay.....	5
please.....	8	Scotch.....	3	stayed.....	1
plum.....	10	see.....	81	stays.....	5
pole.....	2	seen.....	2	steeple.....	3
pony.....	2	see-saw.....	8	stem.....	3
porridge.....	21	sent.....	1	step.....	1
pot.....	3	shake.....	17	stick.....	6
pretty.....	9	shall.....	6	sticks.....	12
pulled.....	7	she.....	52	still.....	11
purple.....	14	sheep.....	12	stockings.....	1
purse.....	2	she's.....	2	stool.....	3
push.....	1	shoe.....	4	stock.....	6
pussy.....	12	shoes.....	20	stopped.....	1
put.....	142	should.....	5	stops.....	3

TABLE 2.—*Oral Vocabulary Used by Teachers with First-Grade Pupils,
1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
story.....	3	till.....	3	washed.....	4
stove.....	1	time.....	18	wasn't.....	1
straight.....	13	times.....	1	waste.....	4
street.....	1	to.....	375	watch.....	3
stuck.....	6	today.....	8	water.....	17
such.....	2	together.....	12	way.....	63
sung.....	1	told.....	5	we.....	63
supper.....	1	too.....	15	wear.....	156
suppose.....	1	took.....	2	wee.....	26
supposed.....	2	toothbrush.....	2	well.....	7
sweater.....	8	top.....	7	we'll.....	8
swing.....	3	touch.....	2	went.....	8
swinging.....	23	towel.....	2	were.....	4
table.....	46	track.....	1	we're.....	1
tables.....	1	train.....	9	what.....	233
tail.....	1	trains.....	1	what's.....	28
take.....	49	tree.....	3	wheelbarrow.....	6
takes.....	1	tricycle.....	1	when.....	17
taking.....	1	trouble.....	1	where.....	22
talk.....	6	truck.....	3	where's.....	6
talking.....	3	try.....	21	whey.....	5
tall.....	1	trying.....	2	which.....	6
tea.....	3	tuffet.....	5	while.....	4
teeter totter.....	2	turn.....	29	whipped.....	2
teeth.....	16	turned.....	1	white.....	1
telephone.....	13	two.....	69	who.....	71
tell.....	16	umbrella.....	3	whose.....	11
ten.....	2	under.....	20	why.....	3
thank.....	24	understand.....	1	will.....	110
that.....	128	understands.....	1	window.....	1
that's.....	37	until.....	6	wipe.....	5
the.....	713	up.....	100	with.....	6
their.....	11	upon.....	3	woman.....	5
them.....	23	us.....	11	wonder.....	5
then.....	31	use.....	12	won't.....	4
there.....	33	uses.....	1	wood.....	2
there's.....	4	very.....	29	wool.....	1
these.....	18	wagon.....	6	word.....	3
they.....	18	wait.....	15	words.....	1
thing.....	2	wake.....	1	would.....	44
things.....	2	walk.....	23	wrong.....	3
think.....	9	walks.....	1	yellow.....	14
this.....	431	wall.....	7	yes.....	32
those.....	4	walnut.....	1	yesterday.....	4
thought.....	1	walnuts.....	4	yet.....	1
three.....	51	want.....	127	you.....	227
through.....	13	wanted.....	1	your.....	270
throw.....	2	wants.....	33	you're.....	66
thumb.....	11	was.....	14	yours.....	25
tick tock.....	9	wash.....	27	yourself.....	1
tie.....	1				

ORAL VOCABULARY USED BY TEACHERS WITH SECOND-GRADE PUPILS

The teachers' vocabulary with second-grade children may involve giving simple directions in the playroom, such as:

Right foot forward. Feet together.
Right foot back. Bend your knees.
Stand up straight.

The teacher may go through these actions as she gives the directions, but as the type of activity is wisely chosen the children respond without the drill necessary to understand what each word in each instruction means. The interest for example, is in dancing, while the English involved is incidental to the real end.

The vocabulary in the story room is suited to the type of activity. The teacher may tell a story to the pupils or she may organize them into groups in which the children will tell the stories or dramatize a selected story.² The total number of words made by stenographic records was 1,379 involving 377 different words. The quantity was limited to four periods of recording, each period being 50 minutes long. This vocabulary is typical of the teachers' vocabulary with second-grade children. It is not necessarily a "set" vocabulary, but varies to meet the needs of childlife activities.

TABLE 3.—*Oral Vocabulary Used by Teachers with Second-Grade Pupils, 1936-37*^a

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
a.....	31	bend.....	1	cannot.....	2
about.....	2	better.....	2	can't.....	3
after.....	1	big.....	5	careful.....	1
all.....	4	birthday.....	4	carry.....	3
along.....	1	bit.....	1	chair.....	4
and.....	13	blue.....	1	chairs.....	2
another.....	1	book.....	3	chalk.....	1
any.....	2	books.....	4	change.....	1
are.....	4	bounce.....	2	chickens.....	4
around.....	1	boys.....	5	child.....	1
as.....	4	bring.....	1	circle.....	1
at.....	4	but.....	4	clap.....	1
away.....	5	by.....	5	clapping.....	1
awhile.....	1			clean.....	1
		cage.....	2	close.....	1
back.....	5	cages.....	1	closed.....	1
ball.....	4	cake.....	3	come.....	11
balls.....	1	call.....	1	coming.....	1
bars.....	1	called.....	1	could.....	1
basket.....	1	came.....	1	couldn't.....	1
be.....	5	can.....	6	cry.....	1
bee.....	2	candle.....	2		

^a This is the oral vocabulary which the teachers used with second-grade children during 4 periods of 50 minutes each.

² This is a very limited record of the vocabulary used by the teacher. It is recommended that a study of the reading vocabulary would complete a research on Mexican vocabulary in an activity school.

TABLE 3.—*Oral Vocabulary Used by Teachers with Second-Grade Pupils,
1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
did	4	had	2	long	5
didn't	3	hands	8	look	6
different	1	hang	3	looked	2
directions	1	happened	1	looks	1
do	26	hard	1	lost	2
does	3	has	4	make	2
doesn't	1	have	11	many	2
dog	1	he	24	May	1
doing	1	hear	1	me	3
don't	4	hello	1	mean	1
down	5	her	1	meat	2
drink	2	here	7	mice	1
duck	3	hid	1	middle	1
each	1	him	1	Mimosa	3
eat	4	himself	1	minute	1
eats	1	his	10	moment	1
else	1	home	2	monkey	4
English	2	how	9	monkeys	1
enough	1	hurry	1	more	1
everybody	5	I	16	morning	2
family	1	if	2	mother	1
fan	1	I'll	2	move	2
far	2	in	13	much	1
fatter	1	into	2	music	1
feed	4	iron	1	my	1
feet	9	is	13	myself	1
fell	1	isn't	2	named	1
find	4	it	18	neck	1
fine	5	just	6	nice	5
first	1	keep	4	no	5
flat	1	kept	1	nose	1
floor	4	kind	1	nostrils	1
foot	4	kitten	1	not	8
for	4	knees	1	now	21
found	2	knew	1	number	1
four	1	know	5	o'clock	1
fourteen	1	knows	1	of	7
frightened	3	lacy	1	oh	2
front	2	language	1	on	19
full	1	laughed	1	once	2
funny	2	lean	2	one	9
get	10	learn	1	only	1
giraffe	4	leaves	1	open	1
girl	1	legs	1	or	5
girls	10	leopard	2	other	3
go	5	let	5	others	1
going	6	let's	4	out	10
good	7	like	7	outside	1
grade	1	liked	1	over	4
grand	3	listen	4	party	2
great	2	listening	1	pepper	1
guess	2	little	7	piano	1
gum	2			picture	1

TABLE 3.—*Oral Vocabulary Used by Teachers with Second-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
pictures.....	1	start.....	1	trees.....	1
pig.....	1	steps.....	1	tried.....	1
places.....	1	stick.....	1	try.....	3
play.....	1	still.....	1	trying.....	1
please.....	8	stop.....	2	turkey.....	2
pool.....	1	story.....	3	turn.....	1
poor.....	1	straight.....	2	two.....	4
pretty.....	3	stretches.....	1	until.....	4
proudly.....	1	stripes.....	1	up.....	11
punch.....	1	such.....	2	us.....	4
put.....	6	supper.....	1	very.....	4
puts.....	1	switched.....	2	voice.....	1
quiet.....	1	table.....	5	wait.....	5
quite.....	1	tail.....	3	waiting.....	1
		tails.....	3	wake.....	1
ran.....	3	take.....	1	walk.....	3
reached.....	1	talk.....	3	want.....	3
reading.....	1	talking.....	1	wanted.....	2
ready.....	7	tall.....	1	wants.....	1
remember.....	1	taught.....	1	was.....	10
right.....	9	tears.....	2	waste.....	1
roll.....	2	tell.....	7	watch.....	1
rooster.....	1	ten.....	1	water.....	2
run.....	1	tender.....	1	way.....	3
running.....	1	thank.....	1	we.....	8
		that.....	8	well.....	1
said.....	2	that's.....	3	went.....	1
say.....	2	the.....	46	were.....	1
school.....	1	their.....	2	were.....	1
scratched.....	1	them.....	5	what.....	23
second.....	1	then.....	2	when.....	5
see.....	3	there.....	3	where.....	2
seen.....	2	these.....	1	which.....	1
sentence.....	1	they.....	6	while.....	1
shadow.....	1	they're.....	1	who.....	4
she.....	1	things.....	2	wild.....	2
shed.....	1	think.....	2	will.....	4
shook.....	1	third.....	1	window.....	1
short.....	2	this.....	9	wish.....	2
shouldn't.....	2	thorns.....	1	with.....	6
show.....	2	those.....	1	won't.....	1
sides.....	1	though.....	1	would.....	5
sign.....	1	thought.....	1	wouldn't.....	2
sit.....	10	three.....	76		
sitting.....	1	till.....	1	yes.....	2
skip.....	2	time.....	2	yesterday.....	1
so.....	5	times.....	1	you.....	55
soldiers.....	1	to.....	27	you'd.....	1
someday.....	1	together.....	5	your.....	24
someone.....	1	told.....	1	you're.....	2
something.....	2	tomorrow.....	1		
Spanish.....	2	tongue.....	1	zebra.....	1
split.....	1	two.....	4		
stand.....	4	tree.....	6		

ORAL VOCABULARY USED BY TEACHERS WITH FIFTH- TO EIGHTH-GRADE PUPILS

Pupils enrolled in these upper grades are definitely classed in fifth, sixth, seventh, or eighth grade according to advancement—largely chronological. But in some phases of their work the pupils are in groups irrespective of classification. In shop work all boys of these four grades meet for one period each day for planning and discussing their shop activities. Similarly, the girls of these four grades meet to discuss activities relative to their home arts and crafts. In the shop and kitchen they work in smaller groups. In the social studies room the fifth grade and sixth grade usually work together; similarly, the seventh and eighth. Frequently other adjustments are made. Then, too, the character of work done by pupils in these four grades is much more similar than that done by second-grade and fourth-grade pupils. This situation explains table 4, as a record of vocabulary to which all pupils of these four grades are exposed. This vocabulary includes 1,003 different words, indicative of the increasing range of activities of these older pupils.

TABLE 4.—*Oral Vocabulary Used by Teachers with Fifth- to Eighth-Grade Pupils, 1936-37*¹

Word	Frequency	Word	Frequency	Word	Frequency
a.....	195	always.....	3	ask.....	6
able.....	1	am.....	7	asparagus.....	1
about.....	22	America.....	1	at.....	24
above.....	1	American.....	1	Atlantic.....	1
absolutely.....	1	amount.....	1	attempt.....	1
across.....	1	an.....	12	attention.....	7
act.....	2	and.....	213	author.....	2
actor.....	2	animals.....	1	away.....	7
add.....	1	another.....	4		
afford.....	1	answer.....	1	back.....	48
afraid.....	1	any.....	14	bad.....	4
after.....	5	anybody.....	3	ball.....	33
again.....	12	anyone.....	4	balls.....	3
against.....	2	anything.....	11	banquet.....	1
ago.....	1	anytime.....	1	barrel.....	3
ahead.....	2	apart.....	3	barren.....	1
air.....	1	appendix.....	1	basket.....	1
airplane.....	1	apricots.....	2	bath.....	1
airtight.....	7	are.....	107	be.....	38
all.....	24	area.....	1	because.....	21
allow.....	3	around.....	11	been.....	7
almost.....	4	arrangement.....	1	beets.....	1
along.....	2	art.....	1	before.....	8
already.....	2	artist.....	1	begin.....	1
alright.....	29	as.....	27	beginning.....	2

¹ Includes fifth-, sixth-, seventh-, and eighth-grade pupils who were grouped together in most of their activities. This is the oral vocabulary which the teachers used with fifth- to eighth-grade children during 14 periods of 50 minutes each.

TABLE 4.—*Oral Vocabulary Used by Teachers with Fifth- to Eighth-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
behind.....	1	canal.....	4	crowded.....	1
being.....	1	cannot.....	4	cut.....	1
believe.....	1	can't.....	6		
belong.....	3	cap.....	1	dad.....	2
belongs.....	2	captain.....	1	dance.....	1
bend.....	6	card.....	4	dates.....	1
best.....	4	care.....	4	day.....	3
better.....	24	careful.....	1	days.....	3
between.....	1	carrots.....	1	deal.....	1
beyond.....	1	carrying.....	2	December.....	2
bias.....	1	case.....	1	definite.....	1
big.....	20	cat.....	2	delegate.....	1
bigger.....	1	catch.....	2	desert.....	4
bird.....	1	center.....	5	deserted.....	1
bit.....	3	certain.....	2	design.....	1
black.....	1	chair.....	6	dictionary.....	1
blowing.....	1	chairs.....	10	did.....	38
blue.....	2	change.....	6	didn't.....	5
board.....	6	chart.....	1	different.....	2
boat.....	1	Chinese.....	1	dirty.....	3
boats.....	1	circle.....	29	discovered.....	2
book.....	12	circus.....	1	discussion.....	2
books.....	13	citizen.....	1	distance.....	2
border.....	1	clap.....	1	divide.....	14
bore.....	1	class.....	9	divided.....	1
borrow.....	2	clay.....	3	division.....	1
borrowed.....	1	clean.....	2	divisor.....	3
both.....	1	climate.....	3	do.....	114
bounce.....	3	close.....	2	docs.....	21
bound.....	1	closed.....	1	doesn't.....	4
box.....	2	cloth.....	2	dog.....	1
boy.....	8	color.....	3	dog's.....	2
boys.....	45	come.....	45	doing.....	13
brain.....	1	comes.....	2	done.....	1
bring.....	7	coming.....	1	don't.....	32
bringing.....	1	commotion.....	1	door.....	3
brought.....	1	complete.....	1	doors.....	1
brush.....	1	consideration.....	1	down.....	54
building.....	1	cook.....	1	draw.....	3
burnt.....	1	copy.....	2	drawing.....	1
busy.....	3	correct.....	1	drawings.....	2
but.....	21	correctly.....	1	draws.....	1
buy.....	3	could.....	15	dreaming.....	1
by.....	28	couldn't.....	1	dried.....	2
cabbage.....	1	count.....	1	drive.....	1
cactus.....	1	country.....	2	dry.....	2
cage.....	2	county.....	4		
cages.....	1	couple.....	2	each.....	10
California.....	12	course.....	1	easier.....	4
call.....	1	covered.....	1	east.....	2
came.....	2	cow.....	1	eat.....	3
camel.....	1	crochet.....	1	edge.....	1
can.....	79	crops.....	1	edges.....	1
		cross-cut.....	4	eight.....	10

TABLE 4.—*Oral Vocabulary Used by Teachers with Fifth- to Eighth-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
eighteen.....	1	first.....	11	going.....	39
eighths.....	2	fits.....	1	gold.....	8
eighty.....	1	five.....	5	gone.....	1
either.....	1	fixed.....	2	good.....	56
Eldorado.....	1	fixing.....	2	good-bye.....	2
elephant.....	3	flag.....	3	got.....	1
eleven.....	1	flaw.....	1	grade.....	5
else.....	8	floor.....	2	grain.....	2
employee.....	1	flowers.....	3	grand.....	1
employer.....	2	follow.....	1	grapes.....	8
end.....	2	food.....	2	grass.....	1
enemies.....	1	fool.....	1	great.....	3
engage.....	1	foot.....	37	green.....	1
engaged.....	2	for.....	32	greens.....	1
English.....	3	forgot.....	5	grew.....	1
enough.....	5	forgetting.....	1	ground.....	5
equal.....	1	four.....	1	groups.....	1
equally.....	1	forty.....	3	grow.....	9
equation.....	2	found.....	3	growing.....	1
especially.....	1	four.....	9	grown.....	7
even.....	4	fourteen.....	1		
ever.....	4	fourth.....	1	had.....	17
every.....	7	fourths.....	2	half.....	14
everybody.....	16	fraction.....	4	halves.....	1
everyone.....	3	fractions.....	3	hammer.....	1
everything.....	2	frayed.....	1	hand.....	1
exactly.....	4	freeze.....	1	handle.....	1
excuse.....	2	Fresno.....	1	hands.....	15
experiment.....	1	Friday.....	1	happen.....	1
experimenting.....	1	frogs.....	1	hard.....	3
		from.....	8	harvested.....	1
fair.....	1	front.....	2	has.....	20
fall.....	3	frost.....	1	have.....	102
far.....	1	fruit.....	2	having.....	1
farmer.....	3	fruits.....	5	he.....	14
farmers.....	3	full.....	1	head.....	1
fast.....	4	funny.....	1	heads.....	1
fault.....	1	fur.....	1	hear.....	6
feel.....	1			heard.....	2
feet.....	33	garden.....	13	hearing.....	1
fellow.....	1	gardens.....	1	help.....	10
fellows.....	24	geographies.....	2	hem.....	3
felt.....	1	Germany.....	1	her.....	3
fertilizer.....	4	get.....	60	here.....	73
few.....	5	getting.....	2	here's.....	2
field.....	1	gets.....	2	high.....	1
fifth.....	1	girl.....	11	him.....	7
figured.....	1	girls.....	49	himself.....	1
figures.....	1	give.....	7	hips.....	2
find.....	29	giving.....	1	his.....	5
fine.....	15	glasses.....	1	hold.....	5
fingers.....	1	glue.....	4	holder.....	1
finish.....	3	go.....	34	hole.....	2
finished.....	2	goes.....	1	home.....	2

TABLE 4.—*Oral Vocabulary Used by Teachers with Fifth- to Eighth-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
horse.....	1	knocking.....	1	magazine.....	1
hostile.....	1	know.....	29	make.....	34
hour.....	1	knowing.....	1	makes.....	1
houses.....	1			making.....	3
how.....	60	laddie.....	1	man.....	10
hundred.....	4	lady.....	2	many.....	25
hurry.....	1	land.....	6	map.....	11
hurt.....	1	lap.....	1	maps.....	1
		large.....	2	mark.....	4
I.....	93	larger.....	3	matter.....	1
idea.....	1	last.....	5	May.....	5
ideas.....	1	laugh.....	1	maybe.....	7
if.....	63	learn.....	4	me.....	12
I'll.....	3	least.....	2	mean.....	6
I'm.....	3	leave.....	4	means.....	3
imagine.....	1	left.....	1	meant.....	1
impolite.....	1	lemons.....	2	measure.....	5
imprint.....	1	length.....	1	men.....	5
improve.....	1	less.....	1	mend.....	1
improvement.....	1	let.....	10	men's.....	1
in.....	94	lets.....	8	Merced.....	2
inch.....	2	let's.....	21	Mexican.....	1
inches.....	16	letting.....	1	Mexico.....	1
inclined.....	1	lettuce.....	1	middle.....	1
index.....	1	level.....	1	might.....	2
information.....	3	light.....	2	mind.....	2
ink.....	1	like.....	19	minute.....	21
instead.....	4	line.....	2	minutes.....	1
interest.....	4	linked.....	1	miss.....	3
interested.....	1	lips.....	1	missed.....	1
into.....	7	list.....	4	mix.....	1
invention.....	1	listed.....	2	mixed.....	1
invert.....	5	listen.....	5	model.....	1
invitation.....	1	listening.....	1	mold.....	6
irrigate.....	4	little.....	23	moment.....	3
is.....	167	lived.....	2	more.....	12
isn't.....	12	loan.....	1	morning.....	4
it.....	183	location.....	1	most.....	1
its.....	1	long.....	6	mouth.....	3
it's.....	9	longer.....	1	move.....	6
I've.....	1	look.....	18	moved.....	1
		looked.....	1	much.....	12
January.....	2	looking.....	3	multiply.....	7
Japan.....	1	looks.....	3	music.....	1
job.....	4	loosely.....	2	must.....	6
just.....	47	lot.....	3	my.....	3
		lots.....	1	myself.....	1
keep.....	7	louder.....	1		
kept.....	2	loudly.....	2	nails.....	1
kill.....	2	lower.....	1	name.....	11
kind.....	2	lying.....	1	named.....	1
knee.....	1			naughty.....	5
knees.....	4	mad.....	1	neat.....	3
new.....	2	made.....	3	neck.....	1

TABLE 4.—*Oral Vocabulary Used by Teachers and Fifth- to Eighth-Grade Pupils 1935-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
need.....	4	paper.....	7	problems.....	1
needed.....	1	parade.....	1	product.....	2
needs.....	3	pardon.....	1	products.....	9
neglect.....	1	part.....	1	pronounce.....	1
neighbor.....	2	parts.....	1	properly.....	1
neither.....	1	pass.....	1	proud.....	3
never.....	1	passed.....	1	puncher.....	1
new.....	2	pay.....	1	put.....	85
next.....	8	peaches.....	9	puzzle.....	1
nice.....	10	pears.....	2	quick.....	1
nicely.....	1	pencil.....	3	quickly.....	1
night.....	1	people.....	13	quiet.....	10
nine.....	5	pepper.....	1	quietly.....	4
no.....	38	period.....	1	quite.....	3
noise.....	2	piano.....	1	rag.....	1
north.....	2	pick.....	6	rain.....	1
not.....	65	picked.....	2	raise.....	2
note.....	1	picture.....	1	rasp.....	1
nothing.....	1	pictures.....	1	rather.....	2
notice.....	1	piece.....	8	read.....	11
now.....	89	pieces.....	1	reading.....	2
number.....	9	pillow.....	1	ready.....	34
numbers.....	2	place.....	9	real.....	4
ocean.....	1	places.....	2	really.....	2
o'clock.....	1	plans.....	1	reason.....	1
of.....	112	plant.....	14	reciting.....	1
off.....	3	planted.....	1	red.....	1
often.....	1	planting.....	2	remarkable.....	1
oh.....	16	plants.....	1	remember.....	12
on.....	61	play.....	2	remove.....	1
once.....	4	playing.....	2	respond.....	1
one.....	114	please.....	28	rest.....	3
onions.....	1	pleats.....	1	review.....	1
only.....	9	plenty.....	2	rich.....	1
open.....	2	pliers.....	1	right.....	48
or.....	16	plot.....	1	Rio Grande.....	1
orange.....	3	pocket.....	1	rip.....	1
oranges.....	2	point.....	3	ripe.....	1
order.....	1	pointer.....	3	rip-saw.....	2
original.....	1	polite.....	1	river.....	1
other.....	11	position.....	1	roll.....	4
others.....	2	possible.....	4	rolled.....	1
our.....	21	possibly.....	1	room.....	9
ourselves.....	1	potatoes.....	3	rooms.....	1
out.....	46	pound.....	1	roots.....	1
outside.....	2	present.....	1	round.....	2
over.....	24	press.....	1	route.....	1
own.....	4	pressing.....	1	row.....	1
pages.....	2	pretty.....	5	rude.....	2
paint.....	5	princes.....	1	ruler.....	2
Panama.....	1	princess.....	1	run.....	9
		probably.....	2		
		problem.....	4		

TABLE 4.—*Oral Vocabulary Used by Teachers with Fifth- to Eighth-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
runaway.....	1	sitting.....	1	studied.....	1
running.....	2	six.....	7	study.....	2
runs.....	1	sixth.....	1	studying.....	4
rush.....	1	sixty.....	1	such.....	4
rushing.....	1	sketch.....	1	sufficient.....	1
		skip.....	1	suggestion.....	1
sack.....	1	sleep.....	1	supply.....	1
Sacramento.....	2	slow.....	2	suppose.....	7
said.....	3	smaller.....	1	sure.....	13
same.....	12	smallest.....	1	surely.....	1
sand.....	1	smooth.....	2	surface.....	1
San Joaquin.....	1	smoothing.....	1	suspect.....	1
savages.....	1	smudge.....	1	sweet.....	1
saw.....	8	so.....	39	swinging.....	1
sawmill.....	1	soldiers.....	1	Swiss.....	1
saws.....	2	sombrero.....	2		
say.....	34	some.....	33	table.....	14
saying.....	1	somebody.....	3	tables.....	1
says.....	1	someone.....	5	take.....	26
school.....	5	something.....	19	taken.....	1
schools.....	1	sometimes.....	1	takes.....	2
scolding.....	1	somewhere.....	2	talk.....	11
scratch.....	1	soon.....	3	talking.....	7
screwdriver.....	1	sound.....	1	taller.....	1
seam.....	1	space.....	2	tango.....	1
seams.....	1	Spanish.....	1	tanks.....	2
season.....	1	speak.....	3	taste.....	1
seat.....	3	special.....	1	tell.....	32
seats.....	1	spell.....	1	ten.....	5
see.....	43	spend.....	1	terrible.....	1
seed.....	1	spinach.....	1	than.....	3
seeds.....	2	spoil.....	2	thank.....	5
seem.....	2	spoiled.....	2	that.....	147
seen.....	6	square.....	17	that's.....	7
sentence.....	1	squirrel.....	1	the.....	334
separate.....	1	stand.....	25	their.....	10
settled.....	3	standing.....	1	theirs.....	1
seven.....	5	start.....	7	them.....	28
seventh.....	2	started.....	3	then.....	23
shade.....	1	starting.....	1	there.....	69
shape.....	2	state.....	2	these.....	23
sharp.....	1	steal.....	1	they.....	36
she.....	7	step.....	1	thing.....	2
should.....	12	sticks.....	1	things.....	13
show.....	9	still.....	2	think.....	30
shower.....	1	stop.....	6	thinking.....	3
shown.....	1	store.....	1	thirty.....	7
shrink.....	2	stored.....	1	thirty-six.....	2
side.....	2	stores.....	1	this.....	91
sides.....	3	story.....	4	those.....	4
sign.....	5	straight.....	26	thought.....	2
signed.....	3	stretch.....	1	thousand.....	1
sir.....	1	stretched.....	1	thread.....	1
sit.....	49	stripes.....	1	three.....	56

TABLE 4.—*Oral Vocabulary Used by Teachers with Fifth- to Eighth-Grade Pupils 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
through.....	8	valley.....	1	whom.....	1
throw.....	2	varnished.....	1	whose.....	2
throwing.....	1	vegetable.....	1	why.....	11
tile.....	1	vegetables.....	7	wide.....	6
time.....	21	very.....	29	widen.....	1
times.....	11	vine.....	1	width.....	2
tired.....	1	volunteer.....	1	will.....	82
to.....	261			wind.....	2
today.....	11	wager.....	1	winding.....	1
together.....	21	wagons.....	1	window.....	1
told.....	1	wait.....	15	wires.....	1
tomato.....	1	walk.....	31	wish.....	5
tomatoes.....	2	want.....	47	with.....	20
tomorrow.....	3	wanted.....	2	without.....	3
tonight.....	1	wants.....	4	woman.....	3
too.....	10	warm.....	1	won't.....	2
tools.....	1	was.....	31	wood.....	5
top.....	1	wash.....	2	woodchuck.....	1
towel.....	1	washing.....	1	word.....	11
train.....	1	wasn't.....	3	words.....	6
trains.....	1	waste.....	1	work.....	14
travel.....	1	wasted.....	1	worked.....	3
tricks.....	1	watch.....	6	works.....	2
tried.....	5	water.....	17	world.....	1
tries.....	1	way.....	16	worst.....	1
trouble.....	2	we.....	160	would.....	29
trunk.....	1	wear.....	1	wrap.....	1
try.....	20	weeds.....	1	wrapper.....	1
trying.....	5	week.....	1	write.....	2
turn.....	14	weeks.....	1	wrong.....	2
twelve.....	10	well.....	22		
twenty.....	1	we'll.....	1	yard.....	5
twenty-four.....	3	were.....	18	yards.....	5
twenty-nine.....	1	west.....	1	yarn.....	1
twins.....	1	what.....	102	year.....	11
two.....	58	whatever.....	1	years.....	1
		what's.....	1	yes.....	28
under.....	1	wheelbarrow.....	2	yesterday.....	1
underneath.....	2	when.....	33	yet.....	3
understand.....	12	where.....	18	you.....	388
understood.....	1	whereabouts.....	1	your.....	109
United States.....	1	whether.....	1	you're.....	1
unless.....	1	which.....	8	yours.....	2
until.....	4	while.....	2	yourself.....	1
up.....	76	whisper.....	1		
us.....	37	whispering.....	1	zone.....	1
use.....	20	who.....	21		
used.....	4	whoever.....	1		
using.....	2	whole.....	5		

THE ORAL VOCABULARY USED BY PUPILS IS NOT IDENTICAL WITH THE ORAL VOCABULARY USED BY TEACHERS

As with the oral vocabulary used by teachers presented in the previous section, so table 5 presents only a very limited representation of the oral vocabulary used by pupils. Many more extended stenographic records are needed to do justice to this phase of the study. Sufficient records are presented to indicate a method of study and to give a clue as to the English being acquired.

It may be safely assumed that by no means all the words used by the teacher in the course of the day will be retained by the pupils. Many may be suitable for adult usage in instructing pupils, but the pupils would not be expected to make use of all of them in return. Many words used in instructing are not appropriate for pupil response. Quite naturally, the oral vocabulary of the pupils will be influenced by that of the teacher, but a comparison of the vocabulary listed in table 5 with that in table 4 reveals a considerable difference between the words used by the teachers and those used by pupils.

ORAL VOCABULARY USED BY FIFTH- TO EIGHTH-GRADE PUPILS

As pupils advance in the grades they may safely be expected to use a vocabulary of greater range and also of more content. Stenographic record of vocabulary in these four groups was taken in part in shop and crafts work. The girls of these four groups were scheduled to spend 1 hour each morning with their crafts teacher in studying, planning, designing, and discussing, as preparation for the execution of their plans an hour later in the day. Similarly, the boys had the same activities with their shop teacher. This "Study" hour—largely oral work among themselves and with the teacher—occasioned much oral vocabulary. Similarly, stenographic records were made for these groups in "Social studies." Usually, at least one-half of the 1-hour period would be spent in library study, getting information through reading. Some vocabulary is picked up in such work, but more particularly so when the group discusses the topic which is under investigation. Obviously, the limited stenographic records of 11,277 running words and 1,278 different words can present only a representative vocabulary used by these pupils.

TABLE 5.—*Oral Vocabulary Used by Fifth- to Eighth-Grade Pupils, 1936-37*¹

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
a.....	255	around.....	14	biggest.....	3
able.....	1	arrow.....	4	bike.....	3
about.....	46	artist.....	1	birdie.....	1
according.....	1	as.....	8	bit.....	7
across.....	2	ask.....	4	black.....	8
at.....	1	asked.....	2	blackberries.....	1
afraid.....	2	asylum.....	1	blades.....	1
Africa.....	2	at.....	29	block.....	2
after.....	6	Atlantic.....	1	blocks.....	8
again.....	3	atlas.....	1	blue.....	6
ago.....	4	avocados.....	1	board.....	3
ah.....	1	away.....	14	boards.....	3
ahead.....	3			boat.....	5
air.....	1	babies.....	1	boats.....	2
airplane.....	2	baby.....	1	bobbin.....	1
all.....	50	back.....	11	body.....	1
almost.....	1	bad.....	12	bones.....	1
alone.....	1	bag.....	1	book.....	26
along.....	3	baggage.....	1	books.....	6
aloud.....	1	Balboa.....	1	boots.....	1
already.....	16	ball.....	7	borrow.....	2
alright.....	10	bananas.....	1	boss.....	2
altogether.....	1	barrel.....	1	both.....	1
always.....	3	base.....	1	bother.....	1
am.....	9	baseball.....	1	bothering.....	1
America.....	2	basket.....	2	bottom.....	1
American.....	2	basting.....	5	bow.....	1
amiable.....	1	bat.....	2	box.....	6
an.....	15	bath.....	3	boxes.....	1
Anaheim.....	1	batter.....	1	boy.....	13
and.....	141	be.....	46	boys.....	9
angel.....	2	beans.....	1	boy's.....	1
animal.....	1	beat.....	3	branch.....	1
animals.....	4	beating.....	1	brays.....	1
another.....	22	because.....	27	break.....	4
answered.....	1	beck.....	1	breaks.....	3
any.....	28	been.....	9	bring.....	11
anybody.....	2	before.....	1	broke.....	3
anyone.....	3	beggar.....	1	broken.....	1
anyplace.....	1	beginning.....	5	broom.....	1
anything.....	2	being.....	2	brother.....	2
anyway.....	2	believe.....	9	brought.....	2
apart.....	1	bell.....	1	brown.....	3
apple.....	1	bells.....	1	brush.....	2
apples.....	1	belong.....	3	brushes.....	2
April.....	1	belt.....	3	building.....	1
apron.....	5	benefits.....	1	bull.....	1
aprons.....	1	berries.....	1	bunch.....	1
Arabia.....	1	best.....	12	burning.....	1
are.....	101	bet.....	5	bus.....	1
aren't.....	7	better.....	10	but.....	33
arithmetic.....	1	big.....	20	buy.....	8
arm.....	1	bigger.....	2	by.....	15

¹ This is the oral vocabulary which the pupils of the fifth to eighth grades used during 18 periods of 50 minutes each.

TABLE 5.—*Oral Vocabulary Used by Fifth- to Eighth-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
cabin.....	1	colors.....	1	different.....	2
California.....	6	comb.....	5	dig.....	1
call.....	5	combing.....	2	directions.....	2
called.....	5	come.....	20	dirt.....	1
calling.....	1	comes.....	4	dirty.....	5
came.....	4	coming.....	7	discovered.....	1
camp.....	3	common.....	1	dish.....	3
can.....	80	company.....	1	dishes.....	1
Canada.....	1	cook.....	2	dive.....	1
canal.....	2	cool.....	1	divide.....	5
canals.....	1	coop.....	1	divisio.....	1
canaries.....	1	coops.....	1	divisor.....	3
cannot.....	3	copy.....	2	do.....	80
can't.....	19	cornbelt.....	1	doctor.....	3
car.....	2	corner.....	4	does.....	10
care.....	3	cost.....	3	doesn't.....	3
careful.....	2	costs.....	1	dog.....	16
carpenter.....	1	could.....	10	dogs.....	3
carry.....	2	couldn't.....	4	doing.....	8
cap.....	1	count.....	1	dollar.....	1
cat.....	5	county.....	1	domestic.....	1
Catalina.....	1	course.....	1	done.....	2
catch.....	2	court.....	2	donkey.....	1
catches.....	1	cousins.....	2	don't.....	132
cats.....	1	cover.....	1	door.....	4
caves.....	1	covered.....	2	doors.....	1
cent.....	1	coyotes.....	1	dots.....	1
cents.....	5	crayolas.....	1	down.....	18
certain.....	1	crooked.....	6	downtown.....	1
chain.....	1	cross.....	2	dozen.....	2
chair.....	6	crowd.....	1	drag.....	1
chalk.....	4	cry.....	1	draw.....	5
change.....	2	crying.....	3	drawing.....	2
chest.....	1	curliest.....	1	drawings.....	2
chestnuts.....	1	curling.....	1	dream.....	1
chicken.....	1	cut.....	22	dreaming.....	1
Chinese.....	1	cute.....	2	dress.....	7
chocolate.....	1	cutting.....	2	drill.....	1
cigar.....	1			drink.....	5
Cinderella.....	1	daisies.....	1	drivers.....	2
circumference.....	2	dance.....	2	drives.....	1
circus.....	1	danced.....	1	dumb.....	1
class.....	1	dancing.....	1	dust.....	1
clay.....	5	dark.....	1		
clean.....	7	darker.....	1	easter.....	6
cleaned.....	1	day.....	9	East.....	3
clocks.....	1	December.....	1	easy.....	7
close.....	1	department.....	1	eat.....	4
closed.....	2	design.....	3	edge.....	1
cloth.....	1	desk.....	2	eggs.....	1
clothes.....	3	dictionary.....	7	eight.....	4
clowns.....	1	did.....	29	eighteen.....	2
cold.....	5	didn't.....	22	elbow.....	1
color.....	3	died.....	1	else.....	5

TABLE 5.—*Oral Vocabulary Used by Fifth- to Eighth-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
embroider.....	1	finger.....	2	get.....	48
embroiderer.....	1	finish.....	14	getting.....	2
end.....	2	finished.....	7	ghost.....	2
engine.....	2	fire.....	2	girl.....	8
England.....	1	fires.....	1	girls.....	7
English.....	6	firesides.....	1	give.....	15
entered.....	1	first.....	17	given.....	1
equal.....	4	fish.....	1	giving.....	1
equals.....	2	fisherman.....	1	glad.....	2
erase.....	2	fit.....	6	glass.....	2
eraser.....	2	fits.....	1	globes.....	1
erasers.....	3	five.....	3	go.....	65
Erie.....	1	fix.....	8	goat.....	2
Eskimo.....	1	flamed.....	1	goats.....	1
Europe.....	1	flames.....	1	godmother.....	1
even.....	2	flies.....	1	goes.....	7
ever.....	2	floor.....	2	going.....	119
every.....	4	Florida.....	1	gold.....	8
everybody.....	1	flour.....	1	gone.....	2
everything.....	11	flowers.....	2	good.....	39
everytime.....	1	fly.....	1	goodbye.....	2
excuse.....	5	fold.....	1	got.....	34
excused.....	1	folks.....	1	government.....	1
expect.....	1	fooling.....	1	grade.....	4
explaining.....	1	football.....	1	graders.....	1
export.....	1	for.....	43	grandmother.....	2
eyes.....	4	Ford.....	1	grapefruit.....	1
face.....	1	forest.....	1	grapes.....	2
fairy.....	1	forget.....	2	green.....	1
fall.....	2	forgot.....	7	ground.....	1
family.....	2	found.....	17	groups.....	1
far.....	6	four.....	10	grow.....	3
fast.....	3	fourth.....	4	grown.....	1
faster.....	2	four-thirty.....	1	guess.....	3
fat.....	3	France.....	2	guitar.....	1
father.....	6	freedom.....	1	hacksaw.....	1
favor.....	1	French.....	4	had.....	17
feel.....	3	freshman.....	2	hair.....	8
feeling.....	1	Fresno.....	1	half.....	8
feet.....	7	frightened.....	1	hallowe'en.....	2
fellow.....	2	from.....	29	hammer.....	4
fence.....	2	fruit.....	4	hand.....	2
field.....	2	full.....	4	handed.....	2
fifteen.....	3	Fullerton.....	1	handed.....	2
fifth.....	1	fun.....	4	handkerchief.....	1
fifty.....	1	funny.....	4	hands.....	3
fight.....	2	game.....	4	handwork.....	1
fighting.....	1	garage.....	3	hanging.....	1
fight.....	1	garden.....	1	happens.....	1
file.....	1	gardens.....	1	happier.....	2
find.....	14	gas.....	2	happy.....	3
finding.....	1	gave.....	1	hard.....	11
fine.....	5	gay.....	1	has.....	16
				hasn't.....	3

TABLE 5.—*Oral Vocabulary Used by Fifth- to Eighth-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
hate.....	1	if.....	27	ladies.....	2
have.....	98	I'll.....	13	lady.....	1
haven't.....	8	I'm.....	91	La Jolla.....	1
he.....	60	imperial.....	1	lamp.....	1
head.....	1	in.....	128	last.....	9
hear.....	5	inch.....	10	laugh.....	1
heard.....	2	inches.....	7	laughing.....	1
height.....	2	index.....	3	laws.....	1
hello.....	1	Indians.....	2	lazy.....	1
help.....	17	Indio.....	1	leading.....	1
helped.....	2	initial.....	1	learn.....	1
helping.....	1	initials.....	1	leave.....	1
hem.....	1	ink.....	2	leaves.....	2
her.....	34	inside.....	10	left.....	5
here.....	88	insist.....	1	leg.....	1
here's.....	15	instead.....	1	legs.....	3
he's.....	7	interesting.....	1	lemons.....	4
hide.....	3	invention.....	1	lend.....	1
hiding.....	1	invert.....	3	length.....	1
high.....	4	iron.....	2	let.....	9
higher.....	3	ironed.....	2	let's.....	13
him.....	19	irrigate.....	1	letter.....	2
hippopotamus.....	1	is.....	153	letting.....	1
his.....	9	isn't.....	14	light.....	2
hit.....	4	it.....	331	like.....	65
hitting.....	1	Italy.....	1	liked.....	1
hold.....	1	it's.....	88	likes.....	1
holder.....	3	I've.....	13	line.....	3
hole.....	3	Jack Horner.....	2	list.....	1
holes.....	3	jealous.....	1	little.....	36
home.....	29	job.....	1	live.....	8
hope.....	1	juice.....	1	lived.....	2
horse.....	7	just.....	51	lives.....	2
horseback.....	1	keep.....	5	living.....	1
horses.....	1	key.....	1	loads.....	1
horsie.....	2	kick.....	2	loaned.....	1
hot.....	6	kicking.....	1	long.....	11
house.....	13	kid.....	1	longer.....	1
houses.....	3	kill.....	1	look.....	87
how.....	64	kind.....	13	looked.....	1
how's.....	1	kinds.....	1	looking.....	8
hundred.....	3	king.....	1	looks.....	5
hungry.....	3	kite.....	2	loops.....	1
hunter.....	1	kites.....	1	lost.....	3
hurry.....	2	kitty.....	1	lot.....	8
hurt.....	5	knife.....	1	lots.....	2
hurts.....	1	knock.....	1	louder.....	3
hypnotism.....	1	knockout.....	1	low.....	2
I.....	449	knot.....	1	lumber.....	1
ice.....	1	know.....	110	ma'am.....	1
icebox.....	1	knows.....	5	machine.....	3
ice cream.....	1			machines.....	2
idea.....	3			mad.....	1

TABLE 5.—*Oral Vocabulary Used by Fifth- to Eighth-Grade Pupils,
1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
made.....	12	mountains.....	1	of.....	102
magic.....	1	mouse.....	2	off.....	1
make.....	81	move.....	3	oh.....	31
makes.....	4	much.....	15	oil.....	3
making.....	8	multiply.....	1	old.....	9
man.....	11	mumbling.....	1	on.....	53
many.....	14	must.....	1	once.....	5
map.....	5	my.....	74	one.....	114
maps.....	1	myself.....	1	ones.....	3
markers.....	1			only.....	10
married.....	1	nail.....	5	open.....	4
matches.....	1	nails.....	6	opened.....	3
material.....	1	name.....	33	or.....	19
matter.....	3	named.....	4	orange.....	3
May.....	3	names.....	6	oranges.....	17
maybe.....	4	napkin.....	1	orchard.....	1
me.....	63	napkins.....	1	orphan.....	1
mean.....	10	navels.....	1	ostrich.....	1
means.....	4	near.....	2	other.....	18
measure.....	4	neat.....	2	ouch.....	2
measured.....	5	neck.....	3	ought.....	1
measures.....	1	need.....	8	ounces.....	1
Mediterranean.....	1	needle.....	4	our.....	11
meeting.....	1	needs.....	2	ourselves.....	1
meetings.....	1	Negroes.....	1	out.....	39
melons.....	1	nervous.....	1	outside.....	6
men's.....	1	never.....	3	over.....	28
meow.....	2	new.....	4	owe.....	1
met.....	1	New York.....	2		
Mexican.....	1	next.....	8	packing.....	3
mice.....	1	nice.....	2	page.....	7
Midas.....	1	nickle.....	3	pages.....	2
middle.....	3	night.....	9	pail.....	1
mighty.....	1	nimble.....	1	paint.....	6
miles.....	3	nine.....	2	palm.....	1
milk.....	1	nineteen.....	1	Panama.....	1
mill.....	1	no.....	65	pants.....	1
millions.....	1	nobody.....	1	paper.....	21
mine.....	18	nobody's.....	1	papers.....	1
miss.....	12	noise.....	1	parade.....	6
mistake.....	1	noisy.....	2	pardon.....	1
mitre.....	2	none.....	2	parking.....	1
modern.....	1	noon.....	1	part.....	1
money.....	6	north.....	2	paste.....	2
monkey.....	1	not.....	52	pattern.....	3
month.....	1	note.....	1	patterns.....	1
months.....	1	nothing.....	12	pay.....	4
moon.....	2	November.....	1	peaches.....	1
more.....	13	now.....	42	pedal.....	1
morning.....	3	number.....	3	Pedro.....	1
mosquito.....	2	numbers.....	2	peeling.....	1
most.....	1	nurse.....	2	pen.....	2
mother.....	7			pencil.....	8
motorcycle.....	1	o'clock.....	2	pencils.....	2

TABLE 5.—*Oral Vocabulary Used by Fifth- to Eighth-Grade Pupils, 1935-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
Pennsylvania	2	purple	3	room	2
penny	2	purpose	1	rough	1
people	9	purse	1	rows	1
peppers	1	push	3	ruler	4
period	1	pussy	1	rules	1
person	2	put	86	run	2
pet	1	putting	2	rung	1
pets	8	puts	3	runs	2
pick	3	quarter	1	Sacramento	1
picked	3	question	1	saddles	1
picker	1	quick	1	said	19
picking	2	quiet	2	salvage	1
picture	7	rabbits	4	same	7
pie	1	radio	2	sandpaper	5
piece	5	radios	1	Saturday	1
pieces	1	radishes	1	saw	11
pig	2	rags	3	say	12
pin	1	railroads	4	says	7
pirates	1	raisins	3	scale	7
pitch	4	ran	2	scales	1
Pittsburg	1	ranch	1	scare	1
place	16	rather	1	scared	1
places	1	reach	2	school	22
plain	4	read	28	scissors	6
plan	1	reading	15	score	1
plane	5	ready	1	screw	2
planes	1	real	2	screws	1
plant	2	really	2	sea	2
play	20	recipes	2	seam	2
playing	2	red	4	seat	1
please	9	relax	1	second	4
plenty	1	relief	1	see	33
pocket	2	remember	5	seeds	3
pockets	2	requires	1	seck	3
police	2	rest	1	seen	8
polish	1	return	1	sell	2
polite	2	ribbon	1	send	6
pony	1	Richfield	2	September	1
pool	1	riders	1	seventh	3
popular	1	right	38	sew	6
pot	2	ring	1	sewing	7
potatoes	3	ringing	1	sews	1
pound	1	ripe	1	shake	1
pounds	1	road	2	shall	13
practice	1	roads	1	shame	1
pressure	1	robbers	1	shape	1
prettiest	1	robin	1	sharpen	1
pretty	13	rockets	2	sharpener	1
prize	4	rocking	1	she	58
pronounce	1	rocks	1	shelves	1
pull	3	roll	3	she's	19
pumpkin	1	rollers	1	ships	1
pumps	1			shirt	1
Purex	1				

TABLE 5.—*Oral Vocabulary Used by Fifth- to Eighth-Grade Pupils, 1936-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
shoes	1	stand	3	teacher	1
shoot	1	stars	3	team	1
short	1	start	14	telegraphs	1
should	4	started	5	telephone	1
shouldn't	1	starve	1	telephones	1
show	8	stay	6	tell	18
shower	5	stayed	1	tells	3
shows	1	stays	1	ten	2
side	8	steal	1	tent	1
sides	1	steam	1	than	8
sideways	1	stepfather	1	thank	11
signals	1	stick	4	thanks	1
since	1	sticks	1	that	125
sing	3	still	3	that's	38
sink	1	stitch	3	the	473
sister	3	stitches	1	their	3
sit	2	stitching	2	them	61
sitting	2	stop	3	then	25
six	1	stopper	1	there	100
sixteen	1	stops	2	there's	12
sixteenth	2	store	1	these	18
sixty	1	stories	1	they	81
size	3	story	9	they're	5
sketch	1	storybook	1	thimble	1
sky	3	straight	8	thing	9
slaves	2	stranger	1	things	7
sledges	2	street	2	think	20
sleep	3	streets	1	thinking	3
sleeping	1	strings	1	third	2
slow	1	stronger	1	thirteen	1
small	5	study	1	thirty	2
smaller	3	studying	1	thirty-one	2
smell	2	stuff	1	this	217
smells	2	summer	2	those	16
snow	1	sun	2	thought	3
so	23	Sunday	2	thread	9
soap	2	supper	1	threaded	1
some	51	suppose	1	three	14
somebody	3	supposed	6	threw	1
something	25	sure	16	through	3
sometimes	1	sweet	1	throw	2
soon	1	swiftly	1	tie	2
sophomore	1	swimming	2	tied	1
sorry	1	table	7	ties	1
sounds	2	tail	1	tight	1
south	2	take	31	time	17
Spanish	6	taken	2	times	4
speak	3	takes	1	tin	1
spell	3	taking	3	tiny	1
spelling	1	talk	4	tired	5
spinach	1	talked	4	to	458
sport	1	talking	8	today	5
springs	1	taste	1	together	3
square	6	tax	2	told	15
squares	4			tomorrow	3

TABLE 5.—*Oral Vocabulary Used by Fifth- to Eighth-Grade Pupils,
1935-37—Continued*

Word	Fre- quency	Word	Fre- quency	Word	Fre- quency
tonight.....	2	very.....	10	wide.....	5
too.....	112	visitors.....	1	wider.....	1
took.....	7	wagon.....	1	wild.....	4
tooth.....	1	wagons.....	1	will.....	26
top.....	3	wait.....	2	wind.....	2
touch.....	1	waiting.....	1	windmill.....	1
touched.....	1	walk.....	3	window.....	1
towel.....	4	walked.....	1	windows.....	1
towels.....	1	wall.....	2	wing.....	1
tracks.....	1	walnuts.....	3	wins.....	1
train.....	1	want.....	82	wire.....	1
trains.....	1	wanted.....	15	wish.....	1
tramp.....	1	wants.....	11	wished.....	1
transportation.....	6	was.....	65	with.....	40
tree.....	4	wash.....	2	without.....	2
trees.....	1	washing.....	1	wobbly.....	1
triangle.....	1	wasn't.....	3	woman.....	1
tried.....	2	wasted.....	2	women.....	1
tries.....	2	watch.....	2	won.....	5
truck.....	1	watches.....	1	won't.....	9
try.....	4	water.....	19	wood.....	10
trying.....	1	watermelons.....	1	woodbox.....	1
Tuesday.....	1	wave.....	1	woodchuck.....	1
tune.....	2	way.....	36	woodwork.....	1
turn.....	2	ways.....	1	word.....	15
turned.....	2	we.....	118	words.....	3
turns.....	1	wear.....	1	world.....	1
twelve.....	2	week.....	1	work.....	17
twenty.....	5	week-end.....	1	working.....	4
twenty-eight.....	1	welcome.....	1	works.....	4
twenty-five.....	3	well.....	11	worse.....	2
twenty-four.....	2	we'll.....	1	worth.....	1
twenty-nine.....	1	went.....	8	would.....	19
twenty-seven.....	1	were.....	19	wouldn't.....	4
twenty-six.....	1	we're.....	17	wrap.....	1
twenty-two.....	3	west.....	2	wrestling.....	2
twice.....	2	wet.....	2	write.....	26
two.....	12	what.....	102	writing.....	9
typewriter.....	2	what's.....	33	wrong.....	9
		wheel.....	1	wrote.....	2
uncle.....	1	wheels.....	4	yard.....	2
under.....	2	when.....	25	yardstick.....	9
understand.....	4	where.....	36	year.....	8
United States.....	3	where's.....	17	years.....	1
up.....	21	which.....	11	yellow.....	7
upon.....	1	while.....	1	yes.....	19
us.....	10	whispering.....	1	yesterday.....	6
use.....	21	white.....	5	yet.....	8
used.....	8	who.....	18	you.....	298
using.....	3	whoever.....	1	youngster.....	1
vacation.....	1	whole.....	3	your.....	38
valencias.....	1	who's.....	1	you're.....	5
valley.....	1	whose.....	4	yours.....	14
vegetables.....	3	why.....	12	yourself.....	2

THE VOCABULARY OF WRITTEN PAPERS IS A RELIABLE INDEX OF THE ENGLISH ACQUIRED

Emphasis in this study is placed upon the vocabulary as found in the written work done in this Mexican school during a period of 6 years. Larger factors in the acquiring of English would be found through a more comprehensive study both in the extensive reading carried on in the school and also in the oral language, which is probably much more prominent in a school with a thorough-going activity program than in one of the traditional stamp. Also, the structure of language as used orally would receive much attention. Practically all of the written work of this school over a period of 6 years was available.

One may question if vocabulary is a reliable index of the English acquired. In the oral communication between teachers and pupils, and between pupils and pupils, language structure, as in sentences, phrases, grammatical forms, etc., is generally approved when in incomplete forms. But vocabulary is imperative. It is readily admitted by the director of this study that in written work language structure is more important. However, in this school of bilingual pupils less attention is given to language structure than would be the case if these pupils were following the traditional course leading to higher grades, to advance to which specific requirements are made. It is not here claimed that vocabulary is the only index of English acquired, but it is one index sufficiently reliable for our present study.

The papers collected during the past 5 years, 1931 to 1936, have varied in quantity, content, and quality influenced by the varied topics studied and by the variation in the supervision. In the beginning, as seen in table 6, the number of papers written in 1931-32 by the 24 pupils of grade I was much in excess of the number written by grade I with 31 pupils in 1934-35. The average number of papers per pupil during the first year was 17, and that during the fourth year was 11. There is very little writing in the first grade, as none is shown for the year 1935-36. The second and third grades do considerably more as the need becomes greater to enrich their play or keep records in handwork. The average number of papers for grade III with 21 pupils in 1931-32 was 3 and in 1934-35 with 20 pupils the average was 12.

In the column at the left of table 6 appear the words, "handwork", "observation", "play", and "stories". These are names of four of the subjects in the curriculum of La Jolla School, as explained elsewhere.

TABLE 6.—Number of Papers Used in Recording Vocabulary and Number of Pupils in Each Grade Who Have Written Papers

	Number of papers and number of pupils, by grades						
	I	II	III	IV	V	VI	VII-VIII
1	2	3	4	5	6	7	8
1931-32							
Papers in:							
Handwork.....	16	101	61	7			
Observation.....				62			
Play.....	391	471	1				
Total papers.....	407	572	62	69			
Number of pupils.....	24	26	21	22			
Average papers per pupil.....	17	22	3	3			
1932-33							
Papers in:							
Observation.....	43	111	53	80			
Play.....	255	186	111	15	13		
Total papers.....	298	297	164	95	13		
Number of pupils.....	24	28	31	19	13		
Average papers per pupil.....	12	11	5	5	1		
1933-34							
Papers in:							
Observation.....				22	41		
Play.....	462	331	245	1			
Total papers.....	462	331	245	23	41		
Number of pupils.....	31	25	31	15	16		
Average papers per pupil.....	15	13	8	2	2		
1934-35							
Papers in:							
Play.....	348	298	236	18	(1)		
Number of pupils.....	31	25	20	2			
Average papers per pupil.....	11	12	12	9			
1935-36							
Papers in:							
Observation.....				29			
Play.....	(1)	1, 211	527				
Story.....				275	29	10	97
Total papers.....		1, 211	527	304	29	10	97
Number of pupils.....		54	21	34	14	5	54
Average papers per pupil.....		23	25	9	2	2	2

¹ Special conditions prevailing led to practically no written work this year.

Total number of papers in study, 6,157; total number of children writing papers, 225.

TABLE 7.—*Number of Running Words and Different Words in the Written Vocabulary, by Grade*

Year	Grade I		Grade II		Grade III	
	Running words	Different words	Running words	Different words	Running words	Different words
1	2	3	4	5	6	7
1931-32.....	5,494	221	20,818	377	2,460	260
1932-33.....	4,987	209	5,587	263	5,025	330
1933-34.....	7,111	176	6,349	190	5,591	133
1934-35.....	7,390	206	7,734	245	7,597	219
1935-36.....			26,111	254	16,260	217
Total ¹	24,982		66,599		36,933	

Year	Grade IV		Grade V		Grade VI		Grades VII-VIII	
	Running words	Different words	Running words	Different words	Running words	Different words	Running words	Different words
1	8	9	10	11	12	13	14	15
1931-32.....	4,149	429						
1932-33.....	3,256	318	607	131				
1933-34.....	1,159	197	2,020	248				
1934-35.....	569	201						
1935-36.....	1,528	285	268	105	2,904	506	4,932	964
Total ¹	10,661		2,895		2,904		4,932	

¹ Grand total of running words, 149,906.

PROCEDURE USED IN RECORDING WRITTEN VOCABULARY

The method used in recording the written vocabulary in the study supplied data for comparison with the *Thorndike Teacher's Word Lists* and the *Horn Written Vocabulary Word List*.

1. All the words in the papers of each pupil were transcribed into type in tabular form.

Example:

the	size	and	population	of
the	ten	southern	counties	of
California	are	very	different	

2. Alphabetical lists were drafted from these typed sheets.
3. Each word was checked against the Thorndike and Horn lists,³ as indicated in table 8.
4. One person read the words from the typed sheets prepared in 1².
5. The alphabetical lists (one column to a page) were divided among as many workers as were necessary to accommodate the number of sheets of alphabetical words.

³ The Gates list might well be included in studies within the primary grades.

6. The reader read one word and the recorder who had the range of words within which the word just read is 'found' called it back to the reader and put a tally after it while the reader proceeded to the next word. With practice this became a rapid process.
7. The number of tallies was checked for accuracy against the total number of words used.
8. The words were listed as in table 8.
9. Summaries of word frequency in written vocabulary for successive years from 1931 to 1936 were prepared, as given in tables 9-13, inclusive.

TABLE 8.—Written Vocabulary Frequency, 1931-32

Word	T ¹	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
a			122	18	471	50	24	7	143	24	760
about					21	10			1	1	22
absorbs							1	1	6	5	7
added									1	1	1
after			1	1			2	2	3	3	6
again			34	10	104	24	3	2	10	8	151
against					41	22					41
aim					22	22					22
alfalfa							20	19	16	16	36
alike			1	1							1
all			55	11	134	34					189
almond		H					15	14	16	15	31
almonds		H									3
already			10	9	1	1	3	3	1	1	12
alright	T	H	3	3	8	5					11
also			16	9							16
am			3	2	20	11					23
an					2	2			8	3	10
and			170	18	592	39	19	7	69	23	850
animal									1	1	1
animals							22	20	15	14	37
another			11	10			2	1	16	7	29
apple							21	19	13	12	34
apples							1	1	4	4	5
apricot		H					19	17	14	13	33
apricots		H					3	3	3	3	6
April			19	11	57	32	8	8	33	24	117
apron					15	11					15
are			81	11	88	34			1	1	170
around			6	6	31	23					37
as					24	23			1	1	25
asparagus							21	19	16	15	37
at			7	7	214	24	5	2	20	10	246
avocado	T	H					22	20	16	15	38
avocados	T	H							1	1	1
away									1	1	1
back			9	9	42	24					51
bag					70	45	1	1	1	1	72
bags			52	10	155	44			1	1	208
ball			92	10	145	31					237
balls			114	10	187	31					301
barley							21	19	17	16	38
basted					8	8					8

¹ Code: T—Indicates that the word is not in Thorndike's Teacher's Word List. H—Indicates that the word is not in Horn's Writing Vocabulary. F—Indicates the frequency of the word in each grade. C—Indicates the number of children using word.

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
bats					1	1					1
be			5	3	103	43			2	2	110
bean			51	10	206	45	1	1	3	2	261
beans							20	18	15	15	35
became							2	2	12	9	14
become									1	1	1
beet							3	3	5	5	8
beets							14	11	12	11	26
before							1	1			1
began					1	1	1	1	2	2	4
bend					41	24	1	1			41
beat					43	23					43
better					6	3					6
between									2	1	2
big			11	7	43	23			4	2	58
birch		H					25	20	15	15	40
black			5	2							5
blackberry							22	20	17	16	39
block									2	2	2
bloomers					6	6					6
blotter	T	H					4	1			4
blotters	T	H					1	1			1
blue			3	3	23	22	1	1			27
board									1	1	1
boards									1	1	1
body					10	10					10
boiled									2	1	2
book			4	3	19	17			1	1	24
both									1	1	1
bottle							4	1	11	4	15
bottom									1	1	1
bought					1	1					1
bounce		H	85	11	87	24					172
bounced		H	6	6							6
bound					2	2					2
bowl							3	1	2	2	5
boy					45	24					45
braided			1	1	1	1					2
brick							19	19	15	14	34
bricks									2	2	2
brown			1	1							1
bump					20	20					20
but			9	9	40	24			2	1	51
by			8	8	1	1			2	2	11
cabbage							18	17	14	13	33
cabbages							2	2	3	3	5
can					47	23			1	1	48
cannot					20	20					20
cantaloupe	T	H					20	19	15	14	33
cantaloupes	T	H					1	1	2	2	3
card					1	1					1
careful					43	24					43
carrot		H							2	2	2
carrots	T						21	19	15	14	33
carry							1	1	1	1	2
cat					20	19					20
cattle							22	20	17	16	33
cauliflower	T	H					23	20	16	15	33
cauliflowers	T	H							1	1	1
center					22	22					22
chairs					1	1					1
charge					9	7					9
cherry							19	19	17	16	33
chestnut							14	13	14	13	28
chestnuts							4	4	1	1	5

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
chimney									2	1	2
chromite	T	H					18	17	15	15	33
circle			63	10	155	24					218
circles			10	9	1	1					11
clay									8	4	9
clean							1	1	1	1	1
cleaned									1	1	1
clear									7	5	7
clock							2	2	5	5	7
close			9	9	1	1			4	4	14
cloth			10	1							1
clown		H			20	20					20
cold					45	23					45
color			2	2							2
colored					2	1					2
colors					1	1					1
come			8	8	83	24					91
copper											
cork							17	17	16	16	33
corn									5	2	5
cost									17	16	38
cotton					93	12	21	20	5	1	98
could					1	1	21	20	17	16	39
counting									6	4	6
course									1	1	1
cows			14	8	6	4					20
cows			15	8	2	1					17
crochet					12	7					12
crocheted					7	6					7
cucumber		H					8	7	11	11	19
cucumbers		H					12	11	6	6	18
currant		H					1	1	1	1	2
currants		H					18	18	16	15	34
cut			2	1	2	2			6	3	10
cylinder					21	21					21
cylinders			16	9	23	23					39
dairy							22	20	17	16	39
date							1	1	1	1	2
dates							19	19	16	15	35
December			10	6	73	36					83
design					19	9					19
devil									6	2	6
did					42	20	4	4	24	13	70
didn't							1	1	1	1	2
dirt									1	1	1
dirty									8	5	8
disc		H	2	1	2	1					4
dish					9	9			12	5	21
dissolves									1	1	1
do			78	10	294	24					372
does							2	2			2
doesn't									3	2	3
dogs					43	22					43
doll					3	1					3
dominoes					20	20					20
don't					19	19					19
double					19	19					19
down			8	8	21	21	3	2	6	5	18
drawn			11	10	2	1					13
dress					7	6					7
drew			1	1	11	11					12
drop							3	2	6	5	9
drops									3	3	3
dry							1	1	3	1	4
each					220	35	1	1	4	1	225
easier			9	9							9
easy					20	20					20

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
edge					11	11					11
embroider					1	1					1
embroidered					11	10					11
embroidery									2	1	2
empty									4	2	4
end											2
ends			1	1					2	1	2
even					23	23					23
ever					3	3					3
every			4	4	27	17					31
everybody					11	11					11
everyone			5	5	8	8					13
everything					1	1					1
excuse					21	20					21
experiment							7	7	28	18	35
experiments									3	3	3
eye					42	22					42
eyes					1	1					1
fairy							1	1			1
fall			25	10	2	2			1	1	28
far			10	8	38	23	1	1			49
fast			38	9	69	23					107
faster			20	10	70	23					90
February			40	14	94	26	31	17	31	17	196
fifteen									1	1	1
fig					1	1	3	3	1	1	5
figs							19	18	16	15	35
fill									6	5	6
filled					2	2	1	1	4	4	7
filter	T	H					2	1	9	5	11
find			5	5			2	2	7	6	14
fine			12	10	1	1					13
finish					20	20					20
fir							24	20	16	16	40
first			199	16	36	33	3	3	21	14	259
fish							21	19	17	16	38
five					40	23					40
float							2	1	6	4	8
floated									2	2	2
floating							1	1	1	1	2
floats									4	3	4
flour		H			11	10			2	1	13
four					9	9			1	1	10
foot					41	20					41
for			48	11	78	34	2	2	4	3	132
forest							7	7	8	8	15
forests							17	4	8	8	25
forget					44	21					44
forgot					19	19					19
forgotten					21	21					21
forth					1	1					1
four			1	1	40	21			3	3	44
fourth							1	1	56	19	57
from							1	1	7	6	8
frost									2	1	2
fruit							5	4	3	3	8
fruits							18	16	13	13	31
full									2	1	2
fun			67	11	245	25					312
funnel		H					2	1	17	14	19
game			14	10	1	24					152
games			9	8	1	39			1	1	52
get			9	9	52	24			5	4	66
getting					1	1					1
girl					22	22					22

TABLE 8.—Written Vocabulary Frequency, 1931-32

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
give					19	19					19
glass							7	3	29	13	36
glasses									10	5	10
go			83	11	134	24	1	1	2	2	220
goes					23	23					23
going			2	2	20	20					22
gold							20	19	15	15	35
gone							2	1	2	2	4
good			25	10	86	24					111
got							2	1	2	1	4
grade			203	16	538	41	37	17	59	23	837
grain							1	1	3	2	4
grains							22	18	12	12	34
grape							3	3	7	6	10
grapefruit	T	H					14	13	12	11	26
grapefruits	T	H					7	7	5	5	12
grapes							18	17	10	10	28
great					21	21					21
green			9	9	1	1					10
groups					19	19					19
had							10	3	29	10	39
half									3	3	3
handkerchief					12	11			1	1	13
handkerchiefs									2	1	2
handle			1	1	1	1					2
hands			9	9							9
handwork	T	H	4	4	64	26			1	1	69
hard			7	7	41	23					48
harder			10	10							10
hardly									1	1	1
has			2	2	43	22					45
have			55	11	175	25					230
having					1	1					1
hear					40	22					40
held							1	1			1
hem					11	9					11
hemstitched		H			11	11					11
her			1	1							1
here			11	10			3	3	6	6	20
high			9	9	22	22	3	1	2	1	36
hill							3	3	10	10	13
his					22	22					22
hit			18	9	102	23					120
hole							9	2	32	6	41
horses			24	9	23	23					47
hot					9	9					9
hour							1	1	3	3	4
hours									3	2	3
how			10	10	111	25	3	2	2	2	126
hurry			18	9	2	1					20
I			29	10	250	31	3	2	6	2	288
if			9	8	44	23			1	1	54
in			80	11	200	23	12	7	1	1	293
inch			2	1	10	10			16	4	28
inches			4	2	75	24	4	2	10	5	93
ink							2	2	8	8	10
inside							2	2	9	7	11
into					20	19	4	3	21	12	45
iron					9	9					9
ironed					7	7					7
is			51	16	351	37	5	5	16	10	423
it			123	21	467	52	9	7	42	23	641
its					4	3			2	2	6
it's					38	21					38
itself									2	2	2

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
January			44	9	81	23					125
jar							5	1	10	2	15
June			17	9							17
just					61	24			2	2	63
jute	T	H			20	9					20
kapok	T	H			4	4					4
kick					1	1					1
kind					20	20					20
kinds					1	1					1
kitchen											
kitty		H	1	1					1	1	1
knees					42	23					42
knew					21	21					21
lamp											
large					22	22	2	2	6	3	6
larger									6	6	30
last									1	1	1
later									2	2	2
laugh					24	21			8	4	10
leather			2	2	20	17					24
left					69	23					22
lemon											
lemons							2	2	7	6	69
let			11	10	55	22	19	18	10	10	9
lets					39	19	1	1	3	3	29
let's			21	10	204	19					70
lettuce											39
level							22	20			225
like			20	8	64	22			16	15	38
lime									3	2	3
limes							2	2	6	6	90
limestone	T	H					19	18	10	10	8
line						23	22	21	19	16	29
lined											37
lines			36	11	3	2			1	1	23
listen					20	20					1
little			7	4	22	22					39
long			3	3	19	16	2	2	9	3	20
look					62	25			3	2	40
looked									3	2	25
looking							3	3	2	1	64
looks									7	7	10
loquat	T	H			20	20			1	1	1
loquats	T	H					16	15	8	1	20
lot							5	5	9	9	24
lots					22	21					14
loud					60	24					22
lunch					41	23					60
machine			1	1							41
made											1
magnesite	T	H	20	15	9	9					9
make					46	14			5	3	71
makes			36	15	64	24	19	18	16	16	35
making			28	10	5	4	2	2	1	1	103
many			2	2	20	11					33
March			10	10	1	1					22
mark			39	12	67	24			2	2	13
material					19	16					106
matter					5	5					19
May			16	9							5
me			31	10							16
measure					3	1					34
measured					20	20					34
middle					23	21					20
					10	10	6	3	13	1	24
			1	1			1	1	6	6	29

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
mine.....					23	23					23
mineral.....		H									35
minerals.....							19	18	16	16	41
minute.....							20	18	21	7	1
minutes.....									1	1	1
more.....							2	1	4	3	6
morning.....			28	10	74	24			1	1	103
most.....									1	1	1
mother.....					25	21					25
motorcycle.....					12	12					12
motorcycles.....					2	1					2
mouth.....					39	20					39
Mrs.....					1	1					1
much.....			2	1							2
music.....			36	10	24	22			1	1	61
muslin.....			9	8							9
my.....					2	2					2
					36	35					36
name.....					30	29					30
names.....					22	22					22
gapkins.....			1	1							1
nectarine.....	T	H					4	4	1	1	5
nectarines.....							17	17	16	15	33
needle.....			3	3	1	1	6	1	23	6	33
new.....					21	21					21
newspaper.....							2	1	4	2	6
next.....									2	2	2
nice.....					20	20			1	1	21
nine.....			2	2	38	35					40
no.....			23	9	80	24					103
nose.....					1	1					1
not.....			34	10	94	24	2	2	1	1	131
November.....					87	23					87
now.....			57	12	117	25					174
nut.....									2	2	2
nuts.....							20	17	14	14	34
oat.....							1	1	1	1	2
oats.....							19	18	16	15	35
October.....			2	2	67	23					69
of.....			25	13	225	44	10	7	53	2	313
off.....			1	1	1	1					2
oh.....					105	24					105
oil.....							17	16	16	16	33
olive.....							3	3	3	3	6
olives.....							17	16	14	13	31
on.....			21	10	92	34	2	2	22	10	137
once.....							1	1			1
one.....			71	10	205	24	1	1	17	11	294
ones.....									1	1	1
onion.....									2	2	2
onions.....							19	17	15	14	34
only.....			8	8	1	1			1	1	10
or.....									1	1	1
orange.....			3	2	1	1	9	8	4	4	17
oranges.....							12	12	13	12	25
other.....			8	8	127	24	3	2	6	5	144
others.....					5	5					5
our.....			70	11	246	27					316
out.....			1	1	49	31	4	3	19	14	73
outside.....									1	1	1
over.....					18	18			2	1	20
own.....					1	1			1	1	2
paid.....											1
paint.....			1	1					1	1	1

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total	
			I		II		III		IV			
			F	C	F	C	F	C	F	C		
1	2	3	4	5	6	7	8	9	10	11	12	
painted.....			1	1								1
pan.....							1	1	11	9		12
paper.....							7	4	28	12		35
papers.....			1	1								1
partner.....					26	22						26
partners.....			18	9	19	18						37
pass.....			13	8	44	23						57
passed.....									1	1		1
peach.....							3	3				3
peaches.....							18	18	17	16		35
peanut.....							4	3	5	5		9
peanuts.....							13	13	10	9		23
pear.....							1	1				1
pears.....							18	17	15	13		33
peas.....							17	16	16	15		33
pecan.....		H					17	16	14	13		31
pecans.....									1	1		1
pepper.....							2	2	8	8		10
peppers.....							15	14	9	9		24
per.....					3	3			1	1		4
perfume.....									2	2		2
persimmon.....	T	H					13	13	7	7		20
persimmons.....							7	7	10	9		17
pick.....					20	20						20
picture.....							3	3	9	6		12
pictures.....									1	1		1
piece.....			1	1			1	1	8	7		10
pieces.....									1	1		1
pillow.....					18	17						18
pillows.....					6	6						6
pin.....					1	1						1
pine.....							24	20	16	16		40
pink.....							2	2	12	8		14
pins.....			27	10	43	21						70
pint.....									1	1		1
place.....					1	1						1
places.....			10	9								10
platinum.....							19	18	15	15		34
play.....			51	10	346	45			1	1		398
playing.....			7	7	7	4						14
plum.....									1	1		1
plums.....							21	20	16	15		37
pocket.....			1	1					1	1		2
pocketbook.....			4	4	3	2						7
pomegranate.....		H					19	17	13	12		32
pomegranates.....							2	2	3	3		5
potato.....							5	3				5
potatoes.....							35	18	34	16		69
poultry.....							21	19	16	15		37
pretty.....			2	2	41	31						43
product.....							1	1	3	3		4
products.....							20	18	13	12		33
prune.....							1	1				1
prunes.....							19	18	17	15		36
pull.....									1	1		1
pulled.....									1	1		1
pumpkin.....							2	2	2	2		4
pumpkins.....							19	18	14	13		33
purple.....					1	1						1
push.....									1	1		1
pushed.....									2	2		2
put.....			2	1	20	18	14	8	79	23		115
pyrite.....	T	H					19	18	15	15		34
quicksilver.....	T	H					18	17	16	16		34
quiet.....					19	19						19

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
quince.....		H					22	20	16	15	38
quite.....					24	24					24
rabbit.....									5	5	5
rabbits.....					22	21	22	20	12	11	56
race.....					21	20					21
radish.....									1	1	1
radishes.....							15	15	16	15	31
ran.....									1	1	1
raspberry.....		H					22	20	17	16	39
read.....					1	1					1
ready.....			36	11	3	2					39
real.....					22	22					22
red.....			14	10	24	23	3	3	9	8	50
redwood.....	T	H					24	20	16	16	40
ribbon.....					3	3					3
rice.....							21	20	16	15	37
right.....			8	7	129	24			1	1	138
roll.....			164	10	232	24					396
rolled.....					2	2					2
rolling.....					20	20					20
roly-polies.....	T	H			17	16					17
roly-poly.....	T	H	10	8	40	22					50
room.....					21	20					21
rooms.....					3	3					3
round.....			1	1	34	24					35
roving.....	T	H			5	2					5
rubber.....			10	10	24	24			1	1	35
rug.....			4	3	11	7					15
rugs.....					15	9					15
ruler.....		H					1	1			1
run.....							3	2	9	6	12
runs.....							1	1	5	5	6
sack.....					17	8			1	1	18
salt.....									13	6	14
salty.....							1	1	2	2	3
same.....									4	4	4
saw.....							2	2	8	6	10
say.....					24	22					24
school.....			7	7	1	1					8
score.....			17	9	65	24					82
scores.....			10	9	2	2					12
second.....					526	41			1	1	527
see.....			68	10	138	24	1	1	4	4	211
seeks.....									1	1	1
sell.....					3	3					3
September.....					21	17			1	1	22
set.....			1	1					2	2	3
seven.....					22	18			2	2	24
sew.....					24	18			1	1	25
sewed.....			6	5	5	3			1	1	12
shall.....			8	8							8
she.....									2	1	2
sheep.....							22	20	17	16	39
shirt.....					1	1					1
shoes.....					1	1					1
should.....					3	3					3
show.....									1	1	1
showed.....									1	1	1
shows.....									1	1	1
side.....					21	20			2	1	23
sides.....			1	1	21	21					22
signal.....					65	22					65
silver.....							18	17	16	16	34
siphon.....	T	H							1	1	1

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
sit					19	19					19
size									2	2	2
sized							1	1	3	3	4
skip			19	10	111	24					130
slide			9	9	22	22					31
slow			16	10	1	1					17
small			6	6			1	1	7	7	14
smallest					20	20					20
so			25	9	88	24			7	5	120
soak									2	2	2
soil									1	1	1
some			33	12	117	32	7	5	31	15	188
something									1	1	1
sometime					9	8					9
sometimes			16	9	34	22					50
spill									1	1	1
spinach		H							1	1	1
spoons									1	1	1
squarc					36	20			1	1	37
squash		H					14	14	17	16	31
stampede					10	9					10
stand			36	11	90	24					126
standing			11	10							11
start					19	18					19
started									1	1	1
starts					19	19					19
stay							1	1	2	1	3
stayed							1	1	1	1	2
stick									1	1	1
sticky									9	5	9
still									1	1	2
stitched					9	8					9
stop					19	19			1	1	20
stopped							1	1	7	6	8
stones					3	1					3
straight			8	8	23	23					31
straw									1	1	1
strawberry							22	20	16	15	38
string			13	12	24	11			1	1	38
stuck									2	2	2
substances									1	1	1
sugar							14	14	16	15	30
sweet							17	16	16	15	33
swing					82	24					82
table			1	1							1
tablespoons									1	1	1
take									1	1	1
taking							1	1			1
talk					41	23					41
tangerine	T	H					17	15	8	7	25
tangerines							4	4	9	9	13
tape					6	5					6
taste									3	2	3
tasted							1	1	3	2	4
ten			26	10	43	21					69
than									1	1	1
that			37	12	104	24			5	4	146
that's					18	7					18
the			98	14	842	37	53	7	242	24	1,235
them			97	11	282	29	1	1	7	6	387
then			44	13	152	44	5	5	47	22	248
there					1	1			1	1	2
these			9	9	5	5			1	1	15
they			90	10	432	24			5	5	527
thing							2	2	14	10	16

TABLE 8.—Written Vocabulary Frequency, 1931-32—Continued

Word	T	H	Grade								Total	
			I		II		III		IV			
			F	C	F	C	F	C	F	C		
1	2	3	4	5	6	7	8	9	10	11	12	
things					1	1						4
third												8
this			1	1	66	26	36	16	5	5		111
thread					13	7		3	13	9		34
threads					11	10						11
three			55	10	56	53			4	3		115
through							1	1	1	1		2
throw			14	8	85	24						99
till									1	1		1
time					34	20			1	1		35
times					34	23						34
tiny							3	2	7	6		10
tip					19	19						19
tired					3	3						3
to			109	16	610	45	6	5	41	17		766
today			27	10	50	24						77
toe					22	21						22
together			1	1	2	2			5	4		8
tomato							17	15	8	8		25
tomatoes							4	4	9	8		13
too			1	1	104	24						105
took			1	1	17	9	3	3	17	12		38
top							2	2	8	6		10
toss		H	71	11	90	22						161
towel					9	8			2	1		11
towels									1	1		1
trimmed			1	1								1
try			8	8	42	23			1	1		51
tube							3	1	9	5		12
tubes							9	2	25	6		34
turned							4	2	2	2		6
turnip							2	2				2
turnips		H					12	12	15	14		27
twelve					13	11						13
twig		H							10	2		10
twigs									5	2		5
two			69	12	72	38			10	7		151
unbleached					1	1						1
under							1	1	9	7		10
until									2	2		2
up			8	8	41	23	5	3	26	12		80
upside							3	2	2	2		5
us			44	11	202	24						246
use			9	9								9
used			1	1	2	2						3
vegetable									3	3		3
vegetables									14	14		36
very			81	10	68	34	22	6	6	6		157
waited									1	1		1
walnut							6	5	8	8		14
walnuts							11	11	8	7		19
want			18	11	54	42	2	2	1	1		75
wanted			1	1			3	3	9	7		13
wants			1	1								1
warm					23	23						23
was			20	10	64	24	8	5	44	17		136
watch			29	10	131	24						160
watched									1	1		1
water							50	19	169	24		219
watermelon							16	15	12	11		28
watermelons							4	4	4	4		8
way					18	18	1	1	1	1		20
we			345	12	914	32	35	7	172	24		1,466
weave					1	1						1

TABLE 8.—*Written Vocabulary Frequency, 1931-32—Continued*

Word	T	H	Grade								Total
			I		II		III		IV		
			F	C	F	C	F	C	F	C	
1	2	3	4	5	6	7	8	9	10	11	12
went.....									8	5	8
were.....									7	5	7
wet.....									3	3	3
we've.....			1	1							1
what.....			16	9	64	23	4	2	15	6	99
wheat.....							21	20	17	16	38
whee.....					24	23					24
when.....			17	10	144	24			6	4	167
where.....					22	22					22
white.....			5	3							5
who.....			7	7	25	21					32
wick.....									4	2	4
wide.....			3	3	21	14	1	1	3	2	28
will.....			9	3	202	42			5	3	216
win.....			9	9	1	1					10
window.....									1	1	1
wine.....			7	7	21	21					28
with.....			47	15	117	43	1	1	17	14	182
won.....			8	8	44	23					52
work.....					1	1			1	1	2
working.....									2	1	2
would.....							1	1	1	1	2
wouldn't.....									1	1	1
wove.....			1	1	1	1					2
write.....					22	21					22
writing.....									1	1	1
yard.....									3	1	3
yarn.....			2	1	2	2	1	1			5
yellow.....			6	5	23	22					29
yes.....					39	23					39
yesterday.....			16	9	26	22					42
you.....			8	8	1	1			1	1	10
your.....			8	8	34	23					42
yours.....					20	20					20

TABLE 9.—*Summary of Written Vocabulary Frequency, 1931-32¹*

	Number of running words	Number of different words
Grade I.....	5,494	221
Grade II.....	20,818	337
Grade III.....	2,460	260
Grade IV.....	4,149	429
Total.....	32,921	723

¹ 24 words not on the Thorndike Teacher's Word List. 54 words not on the Horn Basic Writing Vocabulary List.

TABLE 10.—*Summary of Written Vocabulary Frequency, 1932-33*¹

	Number of running words	Number of different words
Grade I.....	4,987	209
Grade II.....	5,587	263
Grade III.....	5,025	330
Grade IV.....	3,256	318
Grade V.....	607	131
Total.....	19,462	606

¹ 17 words not on the *Thorndike Teacher's Word List*. 26 words not on the *Horn Basic Writing Vocabulary List*.

TABLE 11.—*Summary of Written Vocabulary Frequency, 1933-34*¹

	Number of running words	Number of different words
Grade I.....	7,111	176
Grade II.....	6,349	190
Grade III.....	5,591	133
Grade IV.....	1,159	197
Grade V.....	2,020	248
Total.....	22,230	444

¹ 12 words not on the *Thorndike Teacher's Word List*. 42 words not on the *Horn Basic Writing Vocabulary List*.

TABLE 12.—*Summary of Written Vocabulary Frequency, 1934-35*¹

	Number of running words	Number of different words
Grade I.....	7,390	206
Grade II.....	7,734	245
Grade III.....	7,597	219
Grade IV.....	569	201
Total.....	23,290	261

¹ 5 words not on the *Thorndike Teacher's Word List*. 11 words not on the *Horn Basic Writing Vocabulary List*.

TABLE 13.—*Summary of Written Vocabulary Frequency, 1935-36*¹

	Number of running words	Number of different words
Grade II.....	26,111	254
Grade III.....	16,260	217
Grade IV.....	1,528	285
Grade V.....	268	105
Grade VI.....	2,904	536
Grades VII and VIII.....	4,932	964
Total.....	52,003	1,435

¹ 3 words not on the Thorndike Teacher's Word List. 32 words not on the Horn Basic Writing Vocabulary List.

SPELLING AND GRAMMATICAL ERRORS INDICATE LANGUAGE STRENGTH

Errors or mistakes made by children have in the past held an important place in the school program. Teachers have had definite notions as to the correctness of acts and often in their emphasis on these mistakes fixed the error more definitely in the reactions of the pupil. The incidence of error and the attitude toward error, however, have undergone a great change in recent years. The teacher has become responsible for the mistakes of her pupils and her success is measured in terms of the pupils' success. Rather than invest a great effort in correcting errors, the La Jolla School proposes the elimination or avoidance of error (37). A good teacher is capable of reducing the number of errors through a conscious organization of curriculum content and materials. In writing, the pupils are encouraged to make each sheet as neat as possible with no mistakes in spelling, grammar, or spacing. If a pupil is not sure how to spell a word he wishes to write, the teacher writes the word on the board, thus fixing the correct action and assuring the student of success. Satisfaction gained by the right response is a more potent factor in learning than is dissatisfaction resulting from mistakes. If the same word occurs again and the pupil is unable to write it; he is told. If the word functions normally it will soon become fixed through use.

Many mistakes of these foreign-tongued children are overlooked because what the child keeps in the way of morale, self-confidence, and enthusiasm is more important than the so-called correct response. It has rightly been said that little children do not make mistakes, they only fail to do what adults expect of them. If a child reads a sentence printed, "We played very fast", as "We played so fast", the mistake of one word is not worth noting

because his very enthusiasm in what he is doing indicates that he has caught the idea..

On the basis of the principles expressed in the two preceding paragraphs, together with the directions for written work, the amount of error in written work is surprisingly small. The situation seems highly reasonable. It is a mere matter of complying with the injunction, "Look before you leap."

All the written work, the vocabulary of which is listed in this chapter, was carefully read by two research workers. Both workers were women of experience in story writing and composition. They were accustomed to look for corrections and, therefore, quick to detect error. It has also been the practice of the teachers in this school to check all errors at the time the papers are first examined. It is, therefore, probable that few errors escaped detection. Records indicate a rather small percentage of errors. It did not seem of sufficient importance in this study to list them all or to present a tabular classification of them. Most of them are the result of carrying over peculiarities and construction of the Spanish language to the English expression.

EXAMPLES OF GRAMMATICAL ERRORS *a*

Singular nouns for plural and vice versa

Two for each bean bags is fine.
One for each roly-polies we tip over.
Shall we listen to see if the ball do?
Once tubes had a large hole.
Twenty-eight people had ball.
It is not hard to hit a roly-polies.
It is great fun to build with block.
These ball are so still.
The other teams is called racers.
We made a house with four room.
We like to play game.
We play many game.
Some of us tip most of them over with one balls.

Incorrect verb forms

Did we forgotten how?
We looks at that eye.
This is the way it look.
When the piano play?
It is fun to see which side play best.
It look even nicer.

Incorrect pronouns

What shall us get for each throw?
That will give we five.
Watch we throw them.
See we play bean bags.

Verb omissions

It real fun to roll balls.
Watch us them.
This the toss ball game.
It great fun.

Incorrect sentence structures

We have what fun.
That's what fun.

Table 14 shows the extent of spelling and grammatical errors in the different grades during the 5 years of this record. One may read from the summary given in table 15 that first-grade pupils in 5 years write 24,982 words and make 1,021 errors, that is 4.1 percent. Most of these errors are in spelling, but as the work is conducted, there is practically no such experience as misspelling a word in grade I or II. The writing here is copying from work on the blackboard or from books. The errors, then, are essentially malformation of letters or misplacement of letters, all of which the research worker registers as misspelled words.

Throughout the school in these 5 years less than 4 percent of all words or sentences written present errors. It is not the part of this study to make comparisons—though such is done in a few places. This study is reporting a certain school program of work, in the belief that it is good. Within this report are data which others may examine, measure, and evaluate.

TABLE 14.—*Spelling and Grammatical Errors, by year*

1931-32

	Number of words	Errors		Total number of errors	Total percent of errors
		Spelling	Grammar		
1	2	3	4	5	6
Grade I.....	5,494	22	0	22	0.4
Grade II.....	20,818	406	18	424	2.0
Grade III.....	2,460	357	5	362	14.7
Grade IV.....	4,149	35	5	40	1.0

TABLE 14.—*Spelling and Grammatical Errors, by year—Continued*

1932-33

1	Number of words	Errors		Total number of errors	Total percent of errors
		Spelling	Grammar		
2	3	4	5	6	
Grade I.....	4,987	273	1	274	5.5
Grade II.....	5,587	208	7	215	3.8
Grade III.....	5,025	172	50	222	4.4
Grade IV.....	3,256	274	30	304	9.3
Grade V.....	607	23	6	29	4.8

1933-34

Grade I.....	7,111	51	1	52	0.7
Grade II.....	6,349	126	2	128	2.0
Grade III.....	5,591	212	18	230	4.1
Grade IV.....	1,159	16	1	17	1.5
Grade V.....	2,020	28	7	35	2.2

1934-35

Grade I.....	7,390	673	0	673	9.2
Grade II.....	7,734	498	8	506	6.5
Grade III.....	7,597	291	30	321	4.2
Grade IV.....	569	7	1	8	1.4

1935-36

Grade I.....	26,111	1,165	15	1,180	4.5
Grade II.....					
Grade III.....	16,260	191	29	220	1.3

TABLE 15.—*Summary of spelling and grammatical errors, by grades*

1	Number of words	Errors		Total number of errors	Total percent of errors
		Spelling	Grammar		
2	3	4	5	6	
Grade I.....	24,982	1,019	2	1,021	4.1
Grade II.....	66,599	2,403	50	2,453	3.7
Grade III.....	36,933	1,223	132	1,355	3.6
Grade IV.....	10,661	332	37	369	3.5
Grade V.....	2,895	61	13	74	2.6
Total.....	142,070	5,038	234	5,272	3.7
Grade VI.....	2,904	(1)	(1)	(1)	(1)
Grades VII-VIII.....	4,932	(1)	(1)	(1)	(1)
Total.....	149,906				

¹ Not examined for errors.

QUALITY OF HANDWRITING IS AN INDEX OF LANGUAGE

The reader of this report may question if the quality of handwriting of pupils in school has anything to do with the practice of acquiring English. Those responsible for this study readily decided that writing contributes at least some share to the progress made by pupils in learning English and perhaps more especially so on the part of bilinguals.

The written papers of the pupils from which the vocabulary lists earlier in this chapter were taken were also used as the writing to be scored for quality. Trial scorings made by the research workers led to the suspicion that the sight of the name of the pupil, boy or girl, grade or classification, or subject in which writing was done, influenced in one way or another the scoring by any individual paper. All this information must, therefore, be concealed when the papers were being scored. Also, one scorer must not know the score given by another. All these contingencies must be carefully guarded against when each piece of writing was to be scored by five independent workers.

In table 16 the results of this scoring are summarized for the various grades and during the 5-year period. The Ayres norms for writing throughout the country were used, as a ready means of comparing the quality of writing by these Mexican pupils. The score used as the index for the La Jolla School is the latest score for any year. The scores for each grade, for each month, during the 5-year periods are exhibited in table 17.

The average score for each of the five grades during the period of 5 years follows very closely the normal advancement from the second grade to the fifth, inclusive. In one case, the fourth grade, the score is slightly above the norm.

TABLE 16.—*Scores for quality of writing, by grade and month*

Month	Grade				Grade				
	I	II	III	IV	I	II	III	IV	V
	1	2	3	4	1	2	3	4	5
	1931-32				1932-33				
September.....		31.7		42.0			44.0		
October.....	32.0	36.7			24.6	29.5	40.6	44.0	
November.....		36.5			22.5	27.2		43.3	
December.....	21.4	39.2			19.6	28.2	35.0	49.6	
January.....	28.0	39.2			22.1	29.9	36.8		
February.....	26.9	40.4	46.8	50.1	26.7	32.1	44.2	39.9	45.6
March.....	28.7	44.3			29.2	35.2	43.6	52.2	
April.....	24.0	37.1	40.0	46.0	29.7	32.7			
May.....	27.9	60.0							
June.....	31.2								

TABLE 16.—*Scores for quality of writing, by grade and month—Continued*

Month	Grade					Grade				Grade	
	I	II	III	IV	V	I	II	III	IV	II	III
	7	8	9	10	11	12	13	14	15	16	17
	1933-34					1934-35				1935-36	
September.....	17.6	24.04	35.2	48.0	53.6	14.5	27.3	28.5	26.0	28.8	40.3
October.....	15.7	26.0	28.0	49.0	53.6	16.0	22.1	27.7	34.0	31.7	42.1
November.....	17.2	31.1	38.2	56.0	62.0	17.1	24.7	26.2	36.0	33.8	40.8
December.....	17.6	28.8	37.6	56.0	62.0	18.9	28.6	32.3	42.0	31.9	41.7
January.....	18.1	28.2	40.0	46.0	49.0	18.7	26.3	32.5	28.0	32.9	43.3
February.....	19.1	29.4	40.0	52.0	51.3	20.6	21.2	32.8	27.0	30.3	43.6
March.....	21.8	31.5	43.2	60.0	55.2	19.0	27.0	33.0	44.0	33.0	44.1
April.....	21.9	30.2	37.8	51.3	55.3	25.6	30.5	33.2	31.0	33.3	44.8
May.....				51.5	52.0	24.5	28.7	35.2	46.0	31.4	45.3
June.....											

TABLE 17.—*Writing scores summarized and compared, by year and grade*

Year	Grade							
	I	II	III	IV	V	VI ¹	VII ¹	VIII ¹
	2	3	4	5	6	7	8	9
Ayres norm.....		38	42	46	50	54	58	62
1931-32.....	31.2	60	40	46				
1932-33.....	29.7	32.7	43.6	52.2	45.6			
1933-34.....	21.9	30.2	37.8	51.5	52.0			
1934-35.....	24.5	28.7	35.2	46.0				
1935-36.....		31.4	45.3					
Average score.....	26.8	36.6	40.4	48.9	48.8			

¹ The reader is reminded that these 3 grades were added in September 1936. Their writing for this year has not been included for study.

Educational Principles Guiding La Jolla School

SCHOOL PROCEDURES ARE USUALLY GUIDED BY STANDARD RESULTS OR PLAUSIBLE PRINCIPLES

NO ATTEMPT is made in this study to measure the accomplishments of this Mexican school. No effort has been made to evaluate its practices in English instruction.

The real objective in this school is to "help these boys and girls to do better in all those wholesome activities in which they normally engage" (58, p. 13). Measures for improvement in such activities have not yet been adequately devised. If these activities continue in our schools, it is a sanguine expectation that adequate measures will be developed.

Four very simple principles are used in the guidance of the work at the La Jolla School.

PRINCIPLE 1. PRESENT NEEDS OF LITTLE PEOPLE ARE FUNDAMENTAL IN A SCHOOL PROGRAM

The school program here reported operates on the hypothesis that far more fundamental than the so-called school "fundamentals" are the normal activities of little people (59). School trends in the past quarter of a century have been clearly in this direction. These trends are guided by two distinct, even conflicting, theories. On the one hand, people discover that the "fundamentals" of the old school, the traditional subjects, are the more effectively acquired when instructors and learners take advantage of the strong appeal to children made by the fundamentals in the normal activities of children. These normal activities are thus used as instruments through which attainment in school subjects is reached. Immediate interests lead to interests more remote. On the other hand, many people recognize the values in children's normal activities as ends. Both views contribute to this current trend. But it is the latter view that guides in this Mexican school.

Three considerations must be taken into account.

(1) Children's *needs* are not limited to those *felt* by themselves. Indeed they are not the ones primarily suggested by children. It is here maintained that adults who seriously study children know better than children what their needs are. They are to be identified, not by children's interests and wishes, but by adult study and judgment. Children, as such, are too immature to have reliable judgment as to what is good for them. That which is really good for children would, with some exceptions, be interesting to them. Of course, adults who do not carefully study children are not to be entrusted with the responsibility of judging as to children's needs.

(2) Children are in need of help in their present and immediate activities. What the great psychologist said of the young child may be said of children of school age: The environment in which they live is a big, buzzing, booming confusion. Adjust they must immediately or suffer. What their adjustment is, the immature and inexperienced child can know only superficially. Upon the basis of experience and study, the adult should be able to identify a great variety of "needs" in child life.

(3) Efficient living in the present is probably the best preparation for later efficiency. The contention is that children live in their present. The school should be committed to helping them live better in that present. Present efficiency (with children of school age) is the best preparation for efficiency later (60). This school for Mexican children is conducted strictly upon this principle. The program includes playing games; enjoying stories, pictures, songs; constructing things useful and ornamental; studying the environment in which they live, all without regard for advancement in grades or as preparation for adult life.

PRINCIPLE 2. NORMAL LIFE CONSISTS OF WORK AND PLAY

There may be no more significance in dividing life activities into these two parts than in devising a hundred parts on some very different basis. But this twofold division seems reasonably in tune with real life. Adults engage in labor, and they have their leisure. Children have work to do and they also play. This simple division has some obvious advantages in the scheduling of a school program, and it is believed helpful in adjusting children to daily living.

Let us not attempt to be too scientific in distinguishing work and play. Most parents wish their children to have experience in reacting to the responsibility for work. They wish for their children the opportunity to enjoy play. The school program should be planned to help pupils distinguish between the two and enable them to participate in both. The curriculum at La Jolla School is constituted on this basis.

**PRINCIPLE 3. MOTIVE WITHIN PUPILS SHOULD SUPPLANT MOTIVATION
BY TEACHERS**

The contrast between these two forces was briefly presented in chapter I. Reference is made here only to emphasize that this principle plays an important role in the conduct of this Mexican school. Principles 1 and 2 practically forbid the presence of conditions in a school that would occasion a resort to motivation. The school curriculum is not foreign to the pupils and thus teachers experience no need to resort to extraneous inducements—motivation—to lead pupils to “lay hold” upon the school program. Principles 1 and 2, on the positive side, provide a school day full of normal activities in which they have a motive, i. e., interest, purpose. For these Mexican children, the school day is too short; the week-end is an unwelcome interruption; vacations are a deprivation. Normal life is full of motive for children. And so is La Jolla School.

**PRINCIPLE 4. THE SO-CALLED “FUNDAMENTALS” ARE ADEQUATELY
ACQUIRED IN FUNCTIONING ACTIVITIES**

In 1931-32 standardized tests were given at La Jolla School. Table 18 represents certain data taken from an unpublished report for that year. The achievement in the three R's is creditable, or even better, especially when account is taken of the I. Q. standing of these pupils.

TABLE 18.—Grade Progress From October 1931 to June 1932

I. Q. Data ¹	Dates of tests	Grade placement		Number of pupils		Progress in months
		Norm	La Jolla	At or above norm	Below norm	
1	2	3	4	5	6	7
GRADE I Range: 56-118. Mean: 86.7. Below 100: 19. Above 100: 4.	READING					
	Oct. 26.....	1.1	1.0	5	12	16 in 8.
	June 10.....	1.9	2.6	22	2	
	WRITING					
	Oct. 9.....		22			
	Apr. 25.....		28			
GRADE II Range: 58-137. Mean: 91.9. Below 100: 13. Above 100: 7.	READING					
	Oct. 26.....	2.1	1.1	12	7	11 in 8.
	June 10.....	2.9	2.2	0	22	
	WRITING					
	Oct. 9.....	35	35	8	14	6 in 6.
	Apr. 25.....	38	38	11	11	

¹ The I. Q. in this column is from the Goodenough test. This column may be read: Grade I has a range of I. Q. from 56 to 118; the mean is 86.7. Of 23 pupils in this grade, 19 are below 100 I. Q., and 4 are above 100 I. Q.

² This number is the score in the Ayres Handwriting Scale. The norm score at the close of each grade is, respectively, I (none); II, 38; III, 42; IV, 46.

TABLE 18.—Grade Progress From October 1931 to June 1932—Continued

I. Q. Data	Dates of tests	Grade placement		Number of pupils		Progress in months
		Norm.	La Jolla	At or above norm	Below norm	
1	2	3	4	5	6	7
GRADE III Range: 60-123. Mean: 98.2. Below 100: 6. Above 100: 10.	ARITHMETIC					
	Oct. 26.....					
	June 10.....	2.9	2.9	13	9	
	READING					
	Oct. 26.....	3.1	2.4	1	10	10 in 8.
	June 10.....	3.9	3.4	2	12	
	WRITING					
	Oct. 9.....					
	Apr. 25.....	42	41	7	10	
	ARITHMETIC					
GRADE IV Range: 71-118. Mean: 92.9. Below 100: 13. Above 100: 8.	Oct. 26.....	3.1	2.8	3	9	10 in 8.
	June 10.....	3.9	3.8	5	9	
	READING					
	(Not given.)					
	WRITING					
	October.....					
	Apr. 25.....	46	40	5	12	
	ARITHMETIC					
	Apr. 5.....	4.7	3.6	1	14	8 in 2.
	June 10.....	4.9	4.4	5	15	

¹ This number is the score in the Ayres Handwriting Scale. The norm score at the close of each grade is, respectively, I (none); II, 38; III, 42; IV, 46.

[CHAPTER VII]

Administrative Features in the School

CLOSELY related to the first three principles presented in the preceding chapter are three phases of school administration that very directly affect the procedures of the school. On the subject of investment in this project, English, they have a very definite influence. Quite in accord with the policy dominating this school, these three phases of school administration are very simple.

CLASSIFICATION AND PROMOTION ARE LARGELY GOVERNED BY CHRONOLOGICAL AGE RATHER THAN BY ACADEMIC ACHIEVEMENT

When La Jolla School first introduced this new activity program, about 75 pupils were organized in three groups—prefirst, first grade, and second grade. In the prefirst group were children as old as 8 years; in the first grade children were as old as 12; in the second grade they were as old as 13. Pupils 10 to 13 years of age marked time in the second grade; they were virtually “parked”, to remain there until the extremity of mischief sent them elsewhere. Certain of the larger boys were irritating to teachers and truant officers. It is only just to these older pupils to say that they were irritated by the school regime. The situation was, of course, an extreme one. But, in general, boys and girls retarded in grade advancement by reason of insufficient achievement in the formal school subjects readily take on an inferiority complex. They feel unjustly treated, though they either dare not speak out or they have such respect for their “superiors” as to lead them to say nothing.

Various conditions prevailed at this school which made it inadvisable to reclassify abruptly on the basis of the above principle. The school has worked gradually toward this principle until in the present year, 1936-37, the supervisor was able to make out a classification as given in table 19 with suggestions to the principal. As long as approximately 27 pupils choose to remain in this school rather than go to a junior high or go

out to work, a 6-teacher school must hold pupils back somewhat in classification, though it could advance them in work. Departmental work, as presented in the next section, calls for working groups of approximately equal numbers. The plan outlined in table 19 and further adjustments by the principal make this possible. Virtual assurance of promotion at the close of the year is an inspiration to do one's best rather than an inducement to do as little as possible.

TABLE 19.—*Summary of Age Groups and Possible Classification at La Jolla School, 1936-37*

Ages	Number of pupils	Grade classification	Working groups
1	2	3	4
4 years 5 months to 5 years 5 months.....	12	K	K }.....24
5 years 6 months to 6 years 5 months.....	12	I	I }.....25
6 years 6 months to 7 years 11 months.....	25	II	II }.....22
8 years to 8 years 11 months.....	22	III	III }.....37
9 years to 9 years 11 months.....	23	IV	IV }.....34
10 years to 10 years 11 months.....	14	V	V }.....27
11 years to 11 years 11 months.....	15	VI	VI }.....
12 years to 12 years 11 months.....	19	VII	VII }.....
13 years to 13 years 11 months.....	12	VIII	.....27
14 years to 14 years 11 months.....	8		
15 years to 15 years 11 months.....	6		
16 years to 16 years 11 months.....	1		

NOTE.—The principal may readjust further, for example:
 Select about 5 pupils from grade IV and place temporarily in grade III. Select, not on basis of age, but individual adjustment—probably the weakest ones.
 Similarly, select 3 or 4 pupils from grade VII who would profit more by working in the more advanced group, grade VIII. These shifts are not regrading, it is merely a temporary adjustment. Record changes under "notes."

THE WORK OF THE SCHOOL IS DEPARTMENTAL

The teachers in this school become to some degree specialists—not in reading and writing and arithmetic, but in the guidance of the normal activities of children. One teacher devotes her whole day to helping children enjoy stories. A second teacher helps pupils play games of a higher order and with greater fun. Three teachers have all their time scheduled in shop and handwork activities. One teacher is a specialist in the "social studies." In a six-teacher school, with seven rooms and a large playground, some adjustments must be made, breaking into a strictly departmental organization. This year the play teacher helps the principal who is the story teacher. The social studies teacher has one class in upper-grade story work, but these adjustments are exceptions.

This departmental organization means that the several rooms are equipped for departmental work. The play room has a free floor though chairs and tables are within reach when needed. The room is equipped with game materials. The story room is rather richly supplied with books

for leisure and enjoyable reading. Pictures of these rooms can tell the story of equipment better than words. Similarly, the social studies room is equipped with a growing library of information books, including encyclopedias, dictionaries, and magazines. On one wall eight large maps are so hung as to allow three to be unrolled at once. Wall bulletin boards are extensive to provide ample space for exhibiting pictures and clippings. One room is equipped for artcrafts, one for cooking and laundry, and one for woodshop, with garden connections.

For fear the reader of this report will think the writer has forgotten his central theme, English, it may be pointed out here how these bilingual pupils acquire English. There is no English room. There is no English teacher. There is no schedule for English. There are no textbooks on English. But—the English language is in use. It functions almost continuously. The English language is recognized as a tool—to be used as a tool, not to be learned as a tool. Used well as a tool, it contributes to the betterment of the activity for which it is used. Teachers lead and pupils follow in recognizing that language is to be better if it is to serve the better. This is not a principle in the abstract. It is a policy in specific situations. Thus, teachers and pupils act with the English language—not for its sake, but for the better performance in playing games, in enjoying stories, in studying social problems, and in hand work, in crafts, and shops.

The justification for departmental organization on the basis of the normal activities of children is found in the emphasis given to the betterment of those life activities. The justification for English in this connection is found in its contribution. In the story room the little people are dramatizing *Billy Goat Gruff*. The teacher helps them to use good English words and sentences, if they are to enjoy that story. There will be no language exercises, but there is often a stress upon language forms as a means of more adequately representing *Big Billy Goat Gruff*.

In the playroom English functions. "Just play" is liable to be almost empty of fun. The "just let them play" policy is an indication that the teacher does not appreciate the possibilities of play; she is following the course of least resistance, of least effort, and, in the main, of least assistance to the players. They need help in the form of instruction as well as do those who work. There are various ways of enhancing play. One way is through discussion—here is the use of oral language. School experimentation for some years gives good evidence that this oral language may be extended into written form with good effects upon the improvement of play and increase in higher types of fun. Thus, again, this English language functions, and as a tool is improved.

In the wood shop and in the crafts rooms, from the first grade throughout the school, hand-work construction needs guidance through much study

in designing, measuring, and investigating—all constantly calling for the use of language. This means little if undirected. It is of great significance if well directed. The value is primarily in the improved workmanship. Quite incidentally, the English language usage is advanced.

In the social studies room intermediate and upper-grade pupils make much further use of the English language, first in generous readings for information, then in accurate reports and sharp discussions. In such studies the teacher has the obligation to strengthen the pupils' use of language, if she insists upon high standards in such studies.

Thus, throughout the school, the English language is functioning. In the traditional school the arithmetic teacher—or any teacher teaching arithmetic—is less concerned with language form, as that is more particularly the work of the language teacher. Likewise, in other school subjects. Here is the crux of this language situation. In an "activity school", departmentalized on the basis of normal activities, and with no language or English scheduled, this language is sensed by teacher and pupil more keenly as a tool. This tool, to be effective, must be in good condition.

In the foregoing paragraphs, the reference is largely to the functioning of oral language and some written work by pupils. The data of chapter V report a very limited amount of oral language used. Emphasis is given to the written work. A large phase of this language as it functions in reading is wholly omitted in this study, by reason of lack of time and funds.

In closing this section on the departmental organization of this school, let it be reported that while the four groups of children's activities are central, the English language is constantly regarded as an effective tool—a tool serving as a sort of "over drive" with a positively cultural influence on these activities.

EMPHASIS IS PLACED UPON STUDY

At no place in this school is to be found the custom of making assignments and hearing recitations. The chronological basis of classification, and the departmental organization of work, are conducive to study. The curriculum of the school does not specify a definite amount of work to be done on scheduled time. By studying together, teachers and pupils accomplish as much as time allows and materials permit. Days are too short and vacations are too long—so the pupils insist. A growing library supplants textbooks. Texts are suitable tools for the learning process but a generous library is conducive to study. Without tests or examinations preceded by reviews and drills in preparation, study continues without interruption. Full hour periods, even in the lowest grades, are conducive to study. Plays and games, reading, dramatizing, telling and discussing stories are activities

included. Shop work and home crafts are studied. Social studies call for strenuous intellectual application.

This type of study throughout the school makes use of the English language. The higher the type of study and the higher the type of activity, the higher is the type of language needed. Language is constantly functioning in the betterment of the activities.

PROFESSIONAL SUPERVISION IS IMPERATIVE

However competent the teacher, preferably as a leader in study with her pupils, professional supervision is imperative. Planning of work quite in detail should be done by the supervisor. The teacher has enough to do in executing the plan. This supervisor, as a "super-teacher", must prepare for his work by a careful study of educational principles and school conditions. The supervisor—the principal of the school may or may not be this official—must assign himself the task of helping the teacher rather than to check on what the teachers are doing. Two excerpts of this planning for the teacher are quoted here.

ROLY-POLY (Grade I or II)

Aim.

- To have fun.
- To have more fun with Roly-Polies.
- To get fun in contesting with others.

PRELIMINARY PROVISIONS.

1. On the blackboard draw a score card. See that the top line is easily within reach of the pupils who are to record their scores. Insert along the top the initials of the players, in the order to be followed.
2. Arrange on the floor 10 Roly-Polies of uniform size—preferably—in triangle formation.
* * * * *
5. Provide three sponge balls of 3-inch diameter for each group.
* * * * *
7. Marking positions for the Roly-Polies—6 inches apart, drawing the toe line at a measured distance, and even drawing the score card on the blackboard, all can soon be done by the pupils. It is imperative, however, that this be well done, under the teacher's guidance.

CONDUCT OF THE GAME.

1. It is highly important that the initial steps in this game be taken with care. Thus avoid developing wrong habits at the start. Therefore, the teacher should carefully direct all plays during one whole round, as learning how to play the game rather than real playing at first.
2. The score card on the blackboard is not to be used until players sense

the need of keeping scores as means of measuring their competition with one another. This occurs early in grades II and III but later in grade I.

- * * * * *
9. The playing must be fairly rapid—let the Roly-Polies roll, i. e., topple about—but players must not be rough with these little “playmates.” Roughness will soon break the Roly-Polies. Balls must be rolled—not thrown. It is important that conversation and exclamation be free, but with discretion. The teacher must encourage and limit. The personnel of the Roly-Polies affords subject for comment.
 10. Increasing the wholesome fun in this game calls for—
 - (1) Good technique in playing.
 - (2) Varying the game. Some variations are given below—others will develop as the playing progresses.
 - (3) Much joyful exclamation and conversation, prompted by these Roly-Poly playmates.
 - (4) Score cards which record relative skills exhibited.
 - (5) Composing and reading stories. Some samples are given below.

STORIES

I. Let me roll.
I'll make the clown spin.
There. See him.
The clown thinks this is fun.
I do, too!

III. Roll easy at the baby,
You might hurt him.
But he likes to fall over and pick himself up again.
That's fun for him.
See him laugh.

WEATHER

(Grade V or VI)

I. INVESTIGATE TEMPERATURE CHANGES.

- A. Keep temperature charts comparing thermometer readings taken in the morning, at noon, and in the afternoon, and in the sun and in the shade.
- B. Investigate the reasons for differences in temperature at different seasons and different hours.
 1. Discover how the sun's rays bring heat.
 2. Find out just why they warm the land more than the water.
 - (a) Find out what this has to do with continental and coastal climate in California.
 - (b) Make maps showing coastal and inland temperatures:
 - (1) Average summer and average winter.

- (2) Deviation day and night,
3. Find out just what the atmosphere is.
 4. Decide whether a spot upon the earth's surface receives more heat from vertical sun rays than it does from slanting sun rays.
 - (a) Draw a curved line to represent a portion of the earth's surface. Shade a band over it for atmosphere. Draw a circle straight above the center of the curved line for the sun. Draw straight lines from the sun to the earth. Now draw another sun so that the rays reach the same spot at a 30° angle. Draw the rays to the earth.
 - (b) Decide which rays cover the larger part of the earth's surface and which ones have passed through the more atmosphere.
 5. Find out why some places receive vertical rays and some places receive only slanting rays.
 - (a) Hang an orange from an electric light fixture so that it will swing free at about waist height. Choose a spot for the North Star above and to the north of the "sun." Walk about the sun carrying the globe so that the Equator receives the vertical rays. Be sure that the axis points always to the North Star.
 - (b) Watch the angle at which the rays reach the surface at various points as the earth proceeds upon its year's travel. Notice how and when the rays reach the poles. Decide why the Southern Hemisphere has its winter when we have summer.

Evaluation and Adaptation

WHAT ARE THE VALUES IN THIS STUDY?

How much is all this school work and this study worth? For nearly 7 years (September 1930 to March 1937) these Mexican pupils have been reacting to a rather new and unusual curriculum. Enrollment has doubled, attendance has become almost perfect, reducing to almost nil the work of the attendance officers and eliminating discipline cases. During this same time three teachers have been continuous in their high grade of work. Three other teachers have been in their present positions 1 or 2 years. Another teacher, after 2 years in this school accepted a position in a larger school. These seven teachers, consistently loyal to the new school policy, have served the school in a truly professional spirit.

What are these experiences of pupils and teachers worth?

For nearly 7 years a university professor of education has supervised this school. He has made many trips of 90 miles each to study and to help in the work. The school register records hundreds of visitors—parents, students, teachers, school officials.

What is all this worth?

During 9 months a group of 10 research workers has been collecting data from the work of this Mexican school and preparing this report with special reference to one phase of the work in this school, namely, the acquiring of English by these bilingual pupils.

What is to be the value of this report?

The results of these 7 years are not to be measured in terms of achievements in traditional school subjects. At least this report makes no pretense at any such values; nor is there an attempt to report to what extent this school copes with other schools, either on the basis of a standardized accomplishment or by way of comparison. The director of the study has not intended to measure objectively and by that means support a theory and practice of teaching English to bilingual children.

Some—perhaps many—who read this report will complain because this objective measurement is lacking. The study reports and interprets certain practices based upon a very definite educational principle. Chapter V records very limited results in terms of vocabulary. Other phases of this same problem remain untouched. The details in chapter V invite further study. Through such study, achievements in this school may be compared with those of other schools. But eventually the measurements must be in terms of the real objectives, namely, betterment in the normal activities of children, to which this school has been committed.

At this point a social problem looms large before the investigator. This is the effect of the school program upon the whole community, upon the children of the school when at home, and upon the adult population surrounding the children. Here the English language functions large in a population of foreign-tongued. But it is definitely indicated in this study that beneath and beyond the language problem is the schooling of children in higher types of every-day living.

It must also be said with emphasis that this work in a Mexican school is a study through which may be found a more effective way of educating our English-speaking American children. Many foreign-tongued children are American citizens in the making. More generally, though far from universally, these little people are handicapped by social and economic conditions. The challenging problem is that of placing them while in school in that environment which will most effectively induce them to develop tastes, standards, and habits of living readily approved in American life. La Jolla School is of that character. All other schools in this country have virtually the same problem. But in a school for bilingual children the additional question seems to persist: How is English to be taught them? This study points in the direction of minimizing this as a problem.

Whatever may be the more remote values in this study, the more immediate one is to be found in the suggestions for adaptation in other schools. Most public schools are not privileged to venture as far as La Jolla School. Yet portions of the experiences in this school may be adapted to somewhat different conditions in other schools.

THE PROCEDURES AT LA JOLLA SCHOOL MAY BE ADAPTED IN OTHER SCHOOLS

The topic for this research and report is English and bilingual children, but the progress in this study tends strongly to place English as a language tool to be best acquired, not as an objective, but as an incidental byproduct—while it functions in the furtherance of an activity in which the real objective is located.

In this closing chapter some possible adaptations in other schools are pointed out. The adaptation is to be centered not upon English, but upon the more inclusive phases of the school. This means a school procedure reflecting much of the spirit and conduct of La Jolla School. School authorities who later may make adaptations must expect the acquiring of English as a byproduct.

Suggestions for adaptations may be most effectively made by reporting briefly the changes made in a particular school. The author was given the opportunity to adapt the work at La Jolla School to a school in a neighboring city, located in an industrial section. In the fall of 1934, it enrolled 297 pupils. Approximately 65 percent of the pupils were Mexican and 25 percent Negro. The remainder were Japanese and white Americans of the industrial class who live in that district.

The school was organized as follows:

	<i>Teachers</i>
1 principal (no teaching).	
Kindergarten.....	2
Preprimer.....	1
Grades I, II, III.....	3
Upper and lower adjustment ¹ rooms.....	2
Upper, intermediate, and lower development ¹ rooms.....	3
Cooking and sewing.....	1
Woodshop (a man).....	1

Each teacher had her own room and her own group of pupils.

Four representative daily programs tell a significant story:

<i>Grades A1, B2</i>	<i>Grades A2, B3</i>
9:00- 9:10 Inspection. Attendance. Announcements.	9:00- 9:15 School business and— Mon.—Citizenship. Tues.—Banking.; Wed.—Health. Thurs.—Citizenship. Fri.—Safety.
9:10-10:00 Reading. Spelling study, B2. Writing, A1.	9:15-10:00 Reading groups and recreation.
10:00-10:10 Recess.	10:00-10:10 Recess.
10:10-10:40 Reading.	10:10-10:30 Physical education.
10:40-11:00 Physical education.	10:30-10:40 Drills.
11:00-11:10 Recess.	10:40-11:00 Music.
11:10-11:40 Reading. Remedial reading. Drills.	11:00-11:10 Recess.
11:40-12:00 Language. Story hour. Library period.	11:10-11:40 Social studies unit, art, language, appreciation. Work with materials. Informational reading.
1:00- 1:20 Mon., Wed., Fri.—Spelling.	11:40-12:00 Unassigned (for remedial) dramatization.
1:00- 1:20 Tues., Thurs.—Showers.	1:00- 1:40 Numbers, drills, and games— Thurs.—Showers and stories.
1:20- 1:40 Music.	1:40- 2:00 Spelling. Dismissal.
1:40- 2:00 Art.	

See footnote 1 on p. 96.

Lower development¹

9:00-10:25 Social studies.
9:40-10:00 Folk dancing (Tues.).
10:30-11:10 Girls—Physical education.
Showers—Mon., Wed., Fri.
11:10-11:20 Drill
11:20-11:40 Music
11:40-12:00 Social studies.
1:00- 1:25 Story hour.
1:25- 1:45 Spelling or remedial work.
1:45- 2:30 Girls—sewing.
Boys—shop.
2:20- 2:30 Boys—showers—Mon., Wed.,
Fri.
Games—Tues., Thurs.

Upper adjustment¹

9:00- 9:40 Reading.
9:40-10:10 Arithmetic.
10:10-10:30 Spelling—boys.
10:30-10:40 Recess.
10:40-12:00 Sewing—girls.
10:40-12:00 Boys—writing.
Handwork games.
Social science.
1:00- 1:20 Music.
2:00- 2:10 Recess.
1:20- 2:00 Physical education—showers.
2:10- 2:30 English.
2:30- 3:30 Girls—writing.
Handwork games.
Social science.
2:30- 3:30 Shop—boys.
2:30- 2:50 Spelling—girls.

These programs indicate the formality so often followed in public schools: Short periods, with "no rhyme or reason" in the sequence of the periods, and no policy common among the programs in the school. English appears in various forms: "Reading", "Informational reading", "Remedial reading", "Library period", "Story hour", "Dramatization", "Language", "Writing", "Spelling", "Spelling study", "Drills." These various forms indicate the traditional ways of teaching English, to both the English-speaking children and to the foreign-tongued. The implication in all this is that in other subjects English is not stressed. It may be positively slighted by reason of the emphasis placed upon the other subjects. Textbooks and examinations add to the emphasis upon English in English classes and upon other subjects in other classes.

In adapting the La Jolla School principles and practices to this school, great changes are readily observed. The adaptation is much more extensive in this instance than would be generally advisable, because the same supervisor served both schools, while the principal in the neighboring school readily and strongly approved of adaptation.

The first step in the direction of change was a mapping out of policies and details with the principal. Next, a teachers' meeting was held and the plans carefully outlined. All consented heartily, endorsing the departmental organization, even authorizing the new supervisor to assign rooms and determine upon all furnishings in each room. Given this generously free hand, the supervisor arranged the details of the program. The policy in this program was designed to institute a unique school of high order.

¹ "Adjustment rooms" and "development rooms" are terms used in some school systems to designate ungraded groups of children who because of mental deficiency or other reason are seriously retarded in their school progress or need special coaching services.

English was to function large simply because it must play an important role in a school of this higher order.

All traditional textbooks; all crayolas and paints, rulers, and pencil boxes; all reading charts and flash cards; every abacus and other device intended to help in teaching were removed to the storeroom, a bungalow arranged for this purpose. The rooms were freed from conventional debris. All rooms were made *clean*. Each room rapidly took on character adapted to its individual work. The story room became a beautiful room for the enjoyment of stories. A rug was placed on the floor; small chairs and small tables variously rearranged from day to day. On tables were colorful doilies, and on these were attractively arranged about \$100 worth of picture and story books. The somber blackboards—usually depressing in most schoolrooms—were covered by silotex, painted a pleasing gray. On this silotex a few carefully chosen pictures were artistically hung and occasionally changed. Drapes hung from the tall windows. Ferns and flowers added to the harmony of this room. A piano, too, added its harmony at times.

This once harsh and barren room was now a beautiful place for these little Mexican, Negro, Japanese, and white children, many in bare feet and worn-out clothes. A room for the enjoyment of stories—an atmosphere conducive to intensive listening, to informal dramatization, to talking and laughing over the many pictures, to quietly reading stories, then “breaking forth” into the entertainment of others. This was a story room. No intent here to learn to read; these children read to learn—to enjoy the stories. How did they learn to read? Never mind the answer more than to ask, in reply: How did they learn to talk in their own language?

Two other story rooms were much like this one. In a room richly supplied with books, a beautiful atmosphere and comfortable, reading and talking were normal and spontaneous.

The social studies room for the upper grades was a workroom for study—not a room for fun, but conducive to the enjoyment of intellectual work. This room was well supplied with information books, encyclopedias, atlases, and other materials of reference. From a case of one wall a dozen wall maps were accessible; some were usually drawn down as much more instructive and far more beautiful than the blackboard which they concealed. In this room were paper, pencils, pens, and ink, always in excellent condition and well ordered. Here there were occasions to write—seldom so in other rooms. Writing developed when employed only as it functioned in supplementing much oral discussion and in recording the results of quiet study.

The song, dance, and game room was central for the whole school. All groups came into this room every day. Two teachers, one usually at the piano, led them to appreciate a high type of fun, song, entertainment, and recreation. The large room, 75 by 45 feet, was made attractive by

the colorful game materials, but mostly by the cheering dances, songs, and games. English functions here constantly. And it must function well in such a room with two such teachers. A good time of a high order is the right of all boys and girls. Good English as a tool for expression must develop coordinately with the activity in which it functions.

One very important contribution to this type of departmental work is the grouping of the pupils. In chapter VII (table 19) the chronological classification of pupils at La Jolla School was recorded. The same policy was followed at the neighboring school, though carried out more fully. The age distribution before any change was made was as follows:

Age	Pupils	
	Graded	Ungraded
5 years.....	30	.....
6 years.....	48	.....
7 years.....	38	.....
8 years.....	39	.....
9 years.....	32	2
10 years.....	7	17
11 years.....	3	18
12 years.....	.....	13
13 years.....	.....	19
14 years.....	.....	18
15 years.....	.....	7
16 years.....	.....	6
	197	100

Forty-two pupils 9, 10, and 11 years of age were in the third grade or below. Many of the 77 children 7 and 8 years of age were retarded. In the four "adjustment" and "development" rooms 100 pupils range in ages from 9 to 16. This social situation does not favor good attitude and good work.

The 297 pupils were at once reclassified largely on the basis of age. The principal of the school made exceptions, shifting the older and the younger of the groups so that each of grades I, II, and III had approximately 50 pupils, divided into two sections. Each of grades IV to VIII had approximately 25 pupils. In grade VIII were the 14- to 16-year-olds; in grade VII the 12- and 13-year-olds. This reclassification placed social groups together. Promotions, in some cases as much as 4 years, removed the "inferiority complex" responsible for so much poor work.

An excerpt from one report made by two leading teachers in the school represents the change that took place:

Joe Garcia spent several years in the preprimer group, another 1 or 2 years in the first grade, and was finally placed in a special room. He was generally known as a "problem child."

One of the chief reasons for Joe's retardation was his inability to learn to read and furthermore—he didn't care about reading.

Such was Joe's state of mind when the whole school reorganized on the basis of a "Child life curriculum" and Joe was placed in the sixth grade. Immediately we sensed a change in Joe's attitude. His self-respect increased and his interest was aroused by the unusual and fascinating material available in this upper grade room.

Since Joe was keenly interested in aeronautics, he soon found a book with many interesting pictures. After making inquiries of the teacher, Joe was able to pick out such words as airplane, beacons, radio, telephone, and communication. And in a very short time Joe was "reading" this rather difficult book. Of course, it was necessary for the teacher to help him with such words as *was, the, of, had, have*—but to all intents and purposes *Joe was reading*.

Subject matter, appealing and suited to his age level, an understanding teacher, and a feeling of "belonging" to the group all helped Joe to take an interest in reading and an interest in the school as a whole.

WHAT IS THE CONCLUSION OF THE WHOLE MATTER?

This report concludes with a restatement of:

- (1) The central problem for bilingual children: To give to them that school experience which contributes most to the betterment of their daily lives in the immediate present. Such a school program consists of four groups of activities:
 - (a) Enjoyment of stories.
 - (b) Engaging in wholesome play.
 - (c) Handwork in useful construction.
 - (d) Social studies centered upon children's enlarging environment.
- (2) The place of English in the school: Use English in its various forms as one of many tools for reaching greater efficiency in normal life.
- (3) The teaching of English: The best way to teach English is not to teach English in the form of reading, writing, language, spelling, etc., but to proceed vigorously to read for enjoyment or for needed information; to write with great care when there is a real occasion for doing so; to speak with more and more carefully chosen language when such oral expression definitely functions. English at its very best is of value as it functions. Bilingual children acquire English incidentally.

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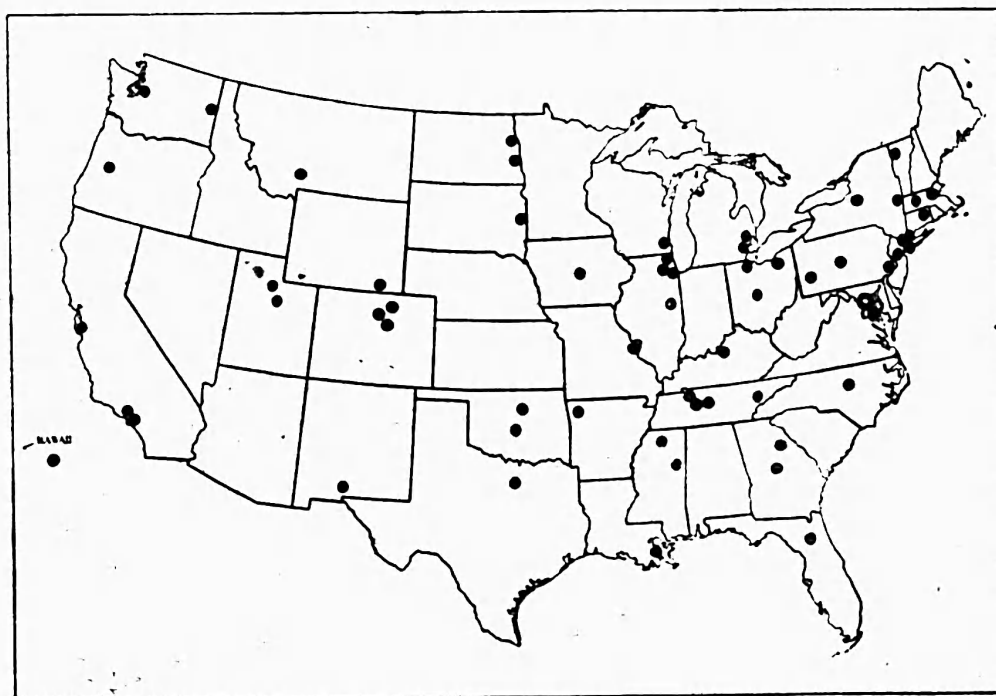
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Location of the institutions participating in the Project in Research in Universities.

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